

UNCLASSIFIED

AD NUMBER
AD838711
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; May 1968. Other requests shall be referred to Naval Weapons Center, China Lake, CA.
AUTHORITY
USNWC ltr, 30 Aug 1974

THIS PAGE IS UNCLASSIFIED

AD 838711

NWC TP 4143
Part 4

STORAGE TEMPERATURE OF EXPLOSIVE HAZARD MAGAZINES

Part 4. COLD EXTREMES

by

I. S. Kurotori and H. C. Schafer
Propulsion Development Department

ABSTRACT. Storage magazine temperature measurements (34,607 data points) from Alaska, Washington, Maine, Newfoundland, and Iceland are under study. This data collection is for the purpose of establishing a temperature criterion by statistical methods for ordnance stored in explosive hazard magazines.

This report is the fourth of the series of reports which will cover explosive hazard magazine storage temperatures throughout the world. This report includes 37 figures and 31 tables.



NAVAL WEAPONS CENTER

CHINA LAKE, CALIFORNIA * MAY 1968

DISTRIBUTION STATEMENT

THIS DOCUMENT IS SUBJECT TO SPECIAL EXPORT CONTROLS AND EACH TRANSMITTAL TO FOREIGN GOVERNMENTS OR FOREIGN NATIONALS MAY BE MADE ONLY WITH PRIOR APPROVAL OF THE NAVAL WEAPONS CENTER.

NAVAL WEAPONS CENTER AN ACTIVITY OF THE NAVAL MATERIAL COMMAND

M. R. Etheridge, Capt., USN Commander
Thomas S. Amlie, Ph.D. Technical Director

FOREWORD

This report is a continuation of the work accomplished by the former U. S. Naval Ordnance Test Station (NOTS), China Lake, California, covered in NOTS TP 4143, Part 1, American Desert, Part 2, Western Pacific, and Part 3, Okinawa and Japan. The effort described herein was undertaken by the Naval Weapons Center (NWC), China Lake, California, to determine the valid temperature environment of ordnance stored in "explosive hazard magazines" located in Alaska, Washington, Maine, Newfoundland, and Iceland.

It is expected that there will be sufficient interest generated among ordnance designers to warrant continued work in the study of storage temperatures in other areas of interest such as sub-tropic, African Desert, etc. This is the fourth in a series of reports.

This work was supported by Task Assignment Number A33-536-711/216-1/F009-06-01.

This report has been reviewed for technical content by Warren W. Oshel.

Released by
CRILL MAPLES, Head
Quality Assurance Division
12 February 1968

Under authority of
G. W. LEONARD, Head
Propulsion Development Department

NWC Technical Publication 4143, Part 4

Published by Propulsion Development Department
Collation Cover, 53 leaves, DD Form 1473, abstract cards
First printing 355 unnumbered copies
Security classification UNCLASSIFIED

ACKNOWLEDGEMENT

The authors are indebted to personnel at the Naval Ammunition Depot, Bangor, Bremerton, Washington; the Naval Air Station, Seattle, Washington; Fort Richardson, Alaska; the Naval Station, Kodiak, Alaska; the Naval Station, Adak, Alaska; the Naval Air Station, Brunswick, Maine; the Naval Station, Argentia, Newfoundland; and the Naval Station, Keflavick, Iceland; who provided the magazine temperature data, photographs and other valuable information concerning Storage Magazines; also Mr. Jack L. Bateman for editing.

Special acknowledgement is due Mrs. Ruth Massaro who has generated, via computer equipment, the pertinent graphs and statistics presented in this report.

CONTENTS

Introduction	1
Scope	1
Background	2
Instrumentation	2
Method of Data Retrieval and Reduction	3
Results	3
Conclusions	13
Appendixes:	
A. Data Handling	15
B. Classification of Magazines	19
C. Monthly Temperature Summaries	41
D. Applicable Statistics	61
E. Statistical Notes and Implications	97

 Figures:

1. The Average Maximum and Average Minimum Temperatures of Earth-Covered Magazines at NAD, Bremerton, Washington	5
2. The Average Minimum and the Average Maximum Temperatures of Earth-Covered Magazines at NAS, Seattle, Washington	5
3. The Average Minimum and the Average Maximum Temperatures of Non-Earth-Covered Magazines at NAS, Seattle, Washington	6
4. The Average Minimum and the Average Maximum Temperatures of Earth-Covered Magazines at Fort Richardson, Alaska	6
5. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazines at Fort Richardson, Alaska	7
6. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NS, Kodiak, Alaska	7
7. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazines at NS, Kodiak, Alaska	8
8. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NS, Adak, Alaska	8
9. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazines at NS, Adak, Alaska	9
10. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NAS, Brunswick, Maine	9

11. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazines at NAS, Brunswick, Maine	10
12. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NS, Argentia, Newfoundland	10
13. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NS, Keflavik, Iceland	11
14. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazines at NS, Keflavik, Iceland	11
15. Typical x, s Card	16
16. Raw Data on Microfilm	16
17. Data on Microfilm	17
18. Aperture Card With Microfilm Insert of Raw Data	17
19. Aperture Card With Microfilm Insert of Data Used by the Computer	18
20. NAD, Bremerton, Washington, Magazine 12-PC-16	22
21. NAD, Bremerton, Washington, Magazine 9-KC-38	23
22. NAS, Seattle, Washington, Magazine 2ZT2	24
23. NAS, Seattle, Washington, Magazine 1X3	25
24. Fort Richardson, Alaska, Magazine D27	27
25. Fort Richardson, Alaska, Magazine W-22	28
26. NS, Kodiak, Alaska, Magazine 4HT7	29
27. NS, Kodiak, Alaska, Magazine 5Y5	30
28. NS, Kodiak, Alaska, Magazine 4HT2	31
29. NS, Adak, Alaska, Magazine 1HT2	32
30. NS, Adak, Alaska, Magazine 3X8	33
31. NAS, Brunswick, Maine, Magazine 4BT6	34
32. NAS, Brunswick, Maine, Magazine 1-Y-4A and B	35
33. NS, Argentia, Newfoundland, Magazine 6BT1	36
34. NS, Argentia, Newfoundland, Magazine 5ZC9	37
35. NS, Keflavik, Iceland, Magazine 2XT8	38
36. NS, Keflavik, Iceland, Magazine 3Y9	39
37. Gaussian Distribution and Skewed Distributions	62

Tables:

1. Data Summary by Station and Magazine Type	4
2. Punchcard Data	15
3. Storage Magazine Description	19
4. Summary of Results, Earth-Covered Magazines, NAD, Bremerton, Washington	42
5. Summary of Results, Earth-Covered Magazines, NAS, Seattle, Washington	43
6. Summary of Results, Non-Earth-Covered Magazines, NAS, Seattle, Washington	44
7. Summary of Results, Earth-Covered Magazines, Fort Richardson, Alaska	45

8. Summary of Results, Non-Earth-Covered Magazines, Fort Richardson, Alaska	47
9. Summary of Results, Earth-Covered Magazines, NS, Kodiak, Alaska	49
10. Summary of Results, Non-Earth-Covered Magazines, NS, Kodiak, Alaska	49
11. Summary of Results, Earth-Covered Magazines, NS, Adak, Alaska	50
12. Summary of Results, Non-Earth-Covered Magazines, NS, Adak, Alaska	53
13. Summary of Results, Earth-Covered Magazines, NAS, Brunswick, Maine	56
14. Summary of Results, Non-Earth-Covered Magazines, NAS, Brunswick, Maine	57
15. Summary of Results, Earth-Covered Magazines, NS, Argentia, Newfoundland	58
16. Summary of Results, Earth-Covered Magazines, NS, Keflavik, Iceland	59
17. Summary of Results, Non-Earth-Covered Magazines, NS, Keflavik, Iceland	60
18. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, NAD, Bremerton, Washington	63
19. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, NAD, Seattle, Washington	65
20. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines, Monthly Summaries, NAS, Seattle, Washington	66
21. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, Ft. Richardson, Alaska	67
22. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines, Monthly Summaries, Ft. Richardson, Alaska	73
23. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, NS, Kodiak, Alaska	78
24. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines, Monthly Summaries, NS, Kodiak, Alaska	79
25. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, NS, Adak, Alaska	80
26. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines, Monthly Summaries, NS, Adak, Alaska	84
27. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, NAS, Brunswick, Maine	88

28. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines, Monthly Summaries, NAS, Brunswick, Maine	89
29. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, NS, Argentia, Newfoundland	90
30. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, NS, Keflavik, Iceland	92
31. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines, Monthly Summaries, NS, Keflavik, Iceland	94

INTRODUCTION

Environmental temperature criteria are a major controlling factor in the design of all types of ordnance. However, the accepted temperature criteria, as set forth in Military Specifications, may be such that there are ordnance that actually meet the needs of our Naval services and yet have failed over-strenuous qualification requirements. If accurate knowledge of the thermodynamic interplay between the atmospheric temperature and the ordnance hardware temperature is known, more realistic design criteria can be assigned. It is therefore important that the actual temperature environment of ordnance be investigated to determine realistic limitations of thermal exposure relative to in-fleet service. Realistic qualification tests can then be formulated to simulate the known service conditions. Accomplishment of the foregoing suggestions can then be used to either (1) authenticate the existing Military Specifications or (2) make more realistic the criteria set forth in those specifications.

The first three parts of this report, American Desert, Western Pacific, and Okinawa and Japan, have documented the hot portion of ordnance exposure. It was found that in the igloo and rudimentary covered storage situations, the Mil-Std high temperature of 165° F was not realistic. It is shown in this report, Part 4 of the series, that the Mil-Std low temperature of -65° F is likewise unrealistic since it has no basis in fact. This statement is supported by temperatures recorded in various storage structures stationed at eight widespread cold zone ammunition storage installations.

SCOPE

This report covers a comparatively small area of the storage environment of explosive ordnance. Storage temperatures (data points) were obtained from Naval facilities located in Washington, Alaska, Maine, Newfoundland, and Iceland, in order to study temperatures within storage magazines. These data were obtained by the personnel at the Naval Ammunition Depot (NAD), Bremerton, Washington; the Naval Air Station (NAS), Seattle, Washington; the U.S. Army, Fort Richardson, Alaska; and Naval Station (NS), Kodiak, Alaska; the Naval Station (NS), Adak, Alaska; the Naval Air Station (NAS), Brunswick, Maine; the Naval Station (NS), Argentia, Newfoundland; and the Naval Station (NS), Keflavik, Iceland, for use in their ammunition safety programs.

The data reported herein are comprised of the measured air temperatures inside the described structures only. Any ordnance stored in these structures cannot be expected to thermally follow the variations

in temperature of the enclosed air. The difference in mass between the air and ordnance can be expected to prevent this. Therefore, any temperatures herein reported can be treated as "conservative" for ordnance stored in these explosive hazard magazines. (In general, the temperature of the ordnance hardware will tend to follow the mean daily air temperature within the storage structure rather than the maximum and minimum recorded air temperatures.)

BACKGROUND

This study in magazine temperature is the fourth of the series which will cover worldwide storage magazine temperatures. Part 1 covered the desert regions of the Western United States; Part 2, the tropics of the Western Pacific; Part 3, Okinawa and Japan. As is true with the storage temperature data acquired for Part 1, Part 2, and Part 3, data from Alaska, Washington, Maine, Newfoundland, and Iceland are available because of the requirements set forth in the Navy Bureau of Ordnance Publication, OP5, "Ammunition Ashore, Handling, Storing and Shipping", which defines a requirement for the maintenance of magazine air maximum and minimum temperature records, with the exception of the data that have been acquired from the Army post at Fort Richardson.

INSTRUMENTATION

The magazine temperature data were obtained through the use of "horseshoe" maximum and minimum mercury thermometers. These thermometers are equipped with steel "tattletale" devices that float on the mercury and remain at the highest and lowest temperature positions reached during the measurement period. The ordnancemen reset the tattletales with a magnet after reading the indicated maximum and minimum temperature for the measurement period. The manufacturers of the thermometers (Taylor, Weksler, and Moeller) warrant that the temperature readings are accurate to within 2° F at the time of delivery. These thermometers are in general mounted on the inside forward face of the back wall of the storage magazines at about eye level (standard procedure).

Nonstandard magazines, such as buried transportainers, may not allow the placement of the thermometers at the standard locations within the magazine. Thermometers have been observed to be mounted on boards, or even bare, and situated for convenience even in "standard" types of magazines.

METHOD OF DATA RETRIEVAL AND REDUCTION

All available storage magazine temperature data from the NAD, Bremerton, Washington; NAS, Seattle, Washington; Fort Richardson, Alaska; NS, Kodiak, Alaska; NS, Adak, Alaska; NAS, Brunswick, Maine; NS, Argentia, Newfoundland; and NS, Keflavik, Iceland, were collected and sent to the Analysis Branch, Propulsion Development Department at NWC. The raw data were reduced to meaningful statistics. The significant points of interest for each location were tabulated. These were (1) the number of temperature measurements collected, (2) the number of measured temperatures less than or equal to 20, 10, and 0°F for each month, and (3) the average maximum and the average minimum temperature for each month.

The raw data input consisted of summary sheets of the maximum and minimum temperatures organized by magazine area, magazine type, and the date of the readings. The information on the summary sheets was transferred to IBM punchcards. A computer was then used to reduce the information into the statistics previously mentioned. The steps by which the raw data were processed are explained in detail in Appendix A. (The descriptions of the magazine classifications pertinent to this report are given in Appendix B.)

RESULTS

A summation of the temperature readings less than 20, 10, and 0°F from both earth-covered and non-earth-covered magazines located in Washington, Alaska, Maine, Newfoundland, and Iceland is presented in Table 1. The detailed monthly breakdowns from which the data in Table 1 were summarized are presented in Appendix C.

The results presented in Table 1 give an indication of low temperatures to be expected in explosive hazard magazines located in cold regions. It must be remembered, however, that the apparent differences in temperature between locations is, to some extent, due to the construction of the individual storage magazines.

The average maximum and minimum temperatures of each month for the eight magazine sites are shown in Fig. 1 through 14. Figures 1, 2, 4, 6, 8, 10, 12, and 13 are the data reported from earth-covered explosive hazard magazines at these various locations. Figures 3, 5, 7, 9, 11, and 14 are the data reported from the non-earth-covered magazines. The upper lines in Fig. 1 through 14 represent the monthly observed average maximums and the lower lines represent the observed average minimums.

TABLE 1. Data Summary by Station and Magazine Type.

Storage locations	Magazine type	Months ^a	N ^b	No. of minimum temperatures less than or equal to			Minimum recorded temperature, °F
				20°F	10°F	0°F	
Naval Ammunition Depot, Bremerton, Washington	Earth-covered	31	4,191	0	0	0	25
Naval Air Station, Seattle, Washington	Earth-covered	18	321	0	0	0	31
	Non-earth-covered	18	159	0	0	0	28
Fort Richardson, Alaska	Earth-covered	67	1,405	29	0	0	18
	Non-earth-covered	67	1,396	339	110	10	-9
Naval Station, Kodiak, Alaska	Earth-covered	8	265	3	0	0	20
	Non-earth-covered	14	585	25	0	0	12
Naval Station, Adak, Alaska	Earth-covered	93	4,839	74	2	0	10
	Non-earth-covered	93	5,815	279	19	0	6
Naval Air Station, Brunswick, Maine	Earth-covered	24	8,551	78	4	0	2
	Non-earth-covered	24	4,171	510	196	24	0
Naval Station, Argentia, Newfoundland	Earth-covered	30	1,444	33	0	0	13
Naval Station, Keflavik, Iceland	Earth-covered	32	882	29	4	0	8
	Non-earth-covered	32	583	146	24	0	4

^a Length of time in months.

^b Number of data points represented in the sample.

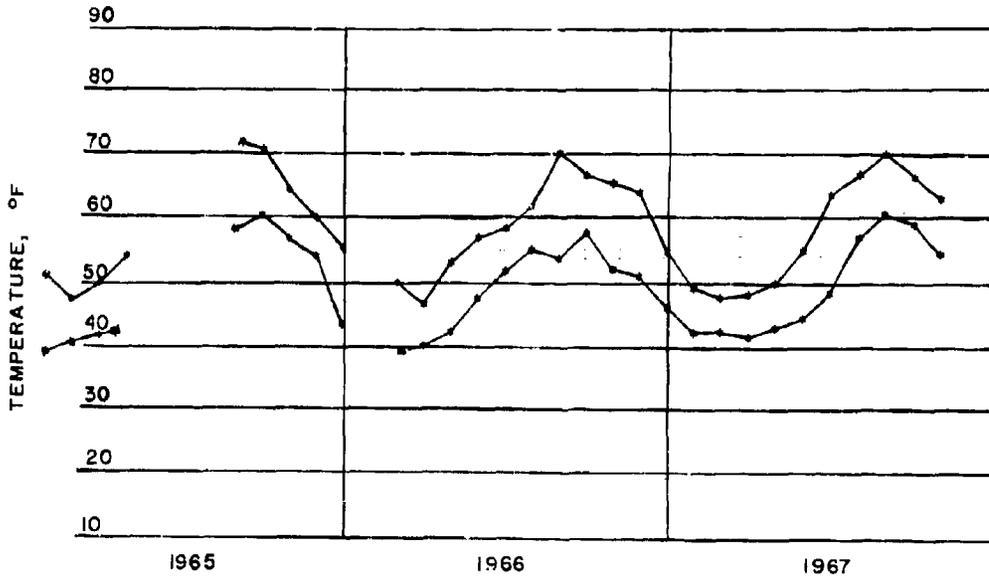


FIG. 1. The Average Maximum and Average Minimum Temperatures of Earth-Covered Magazines at NAD, Bremerton, Washington.

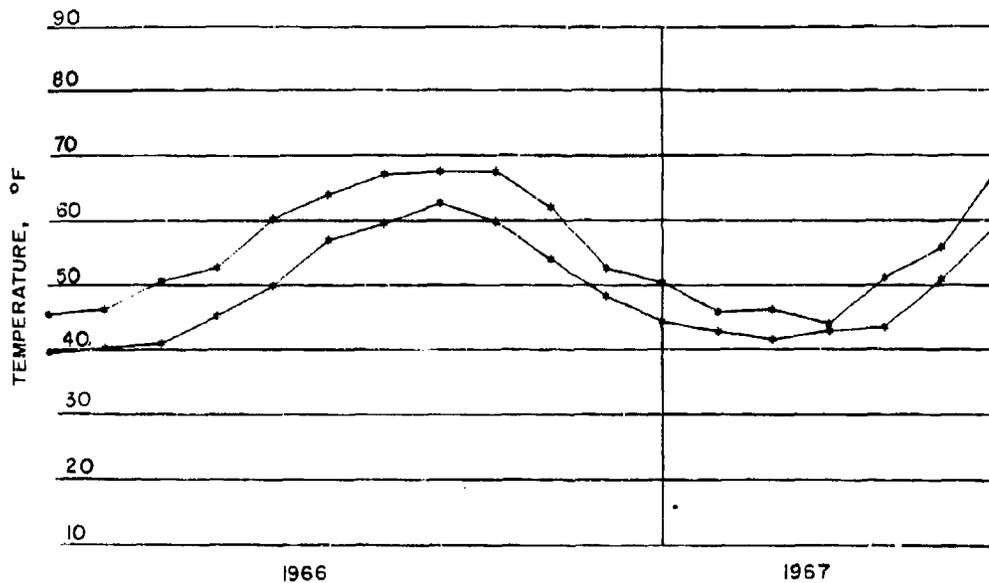


FIG. 2. The Average Minimum and the Average Maximum Temperatures of Earth-Covered Magazines at NAS, Seattle, Washington.

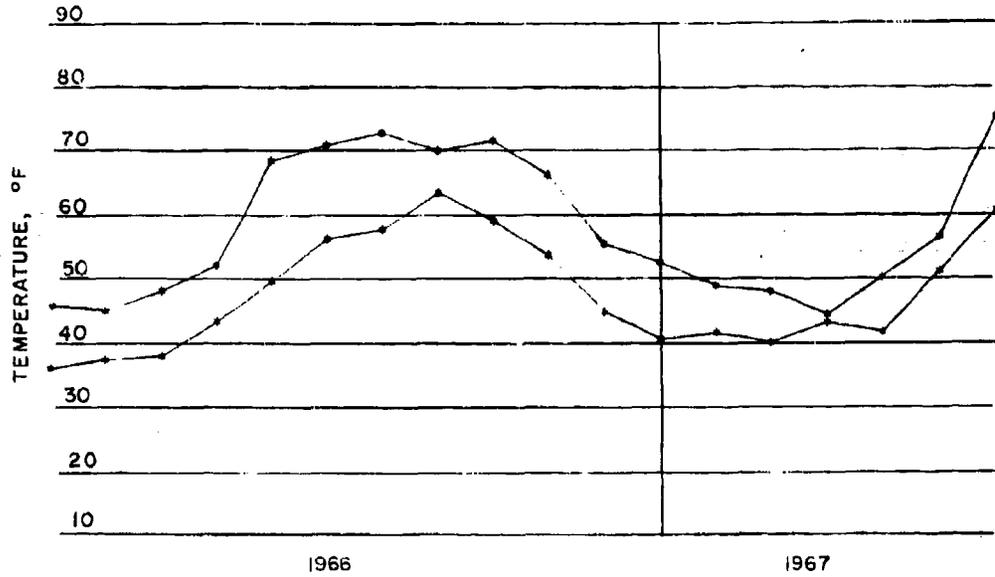


FIG. 3. The Average Minimum and the Average Maximum Temperatures of Non-Earth-Covered Magazines at NAS, Seattle, Washington.

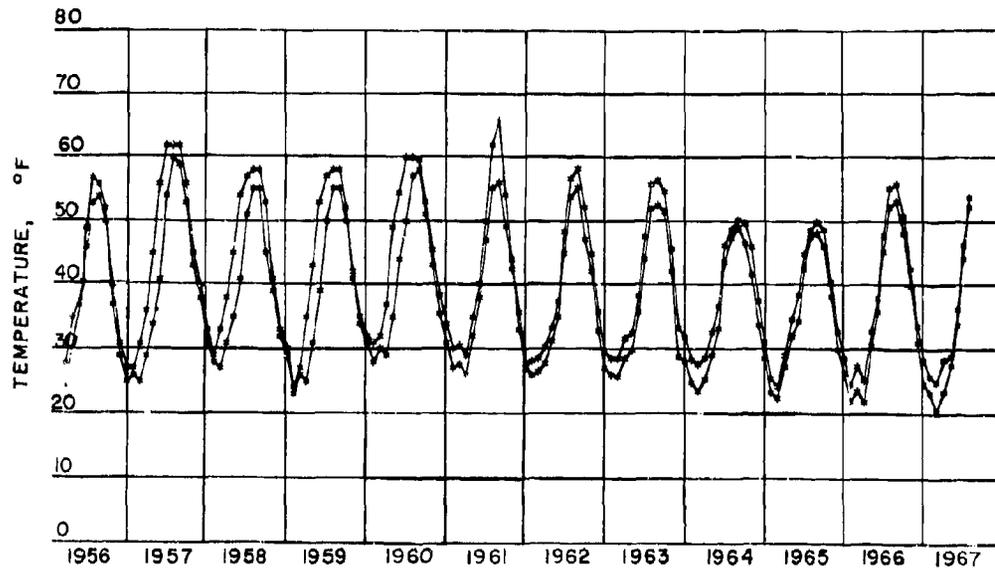


FIG. 4. The Average Minimum and the Average Maximum Temperatures of Earth-Covered Magazines at Fort Richardson, Alaska.

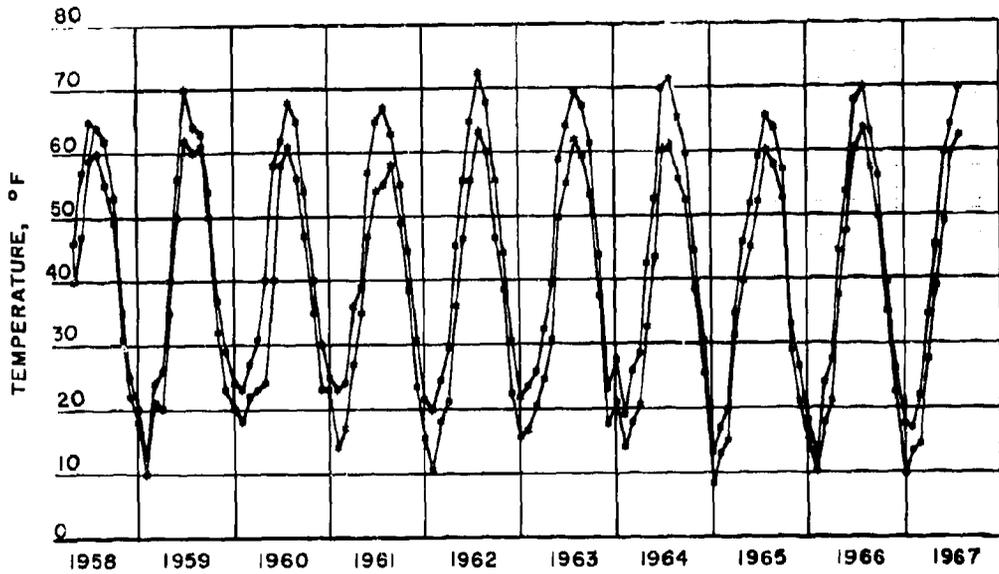


FIG. 5. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazine at Fort Richardson, Alaska.

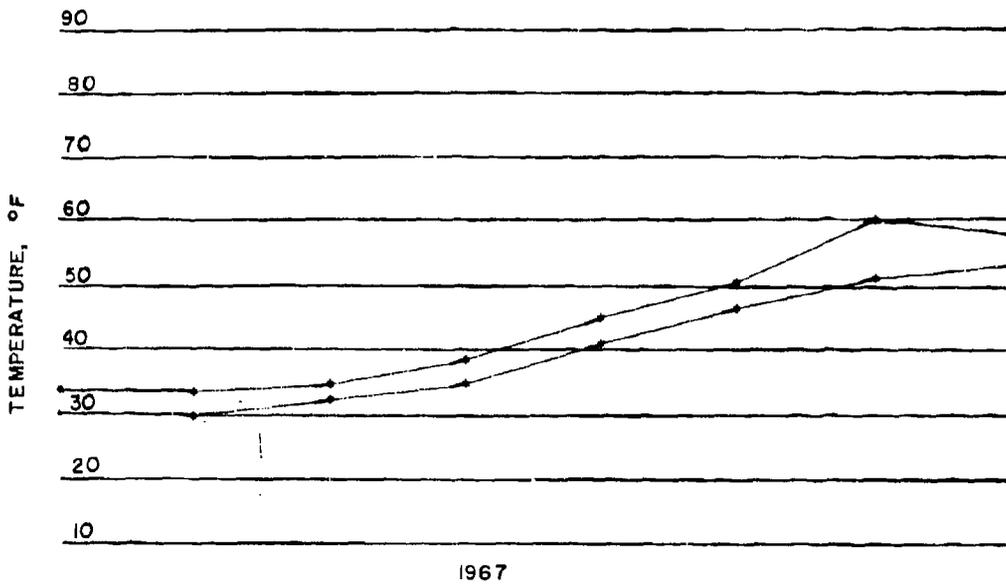


FIG. 6. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NS, Kodiak, Alaska.

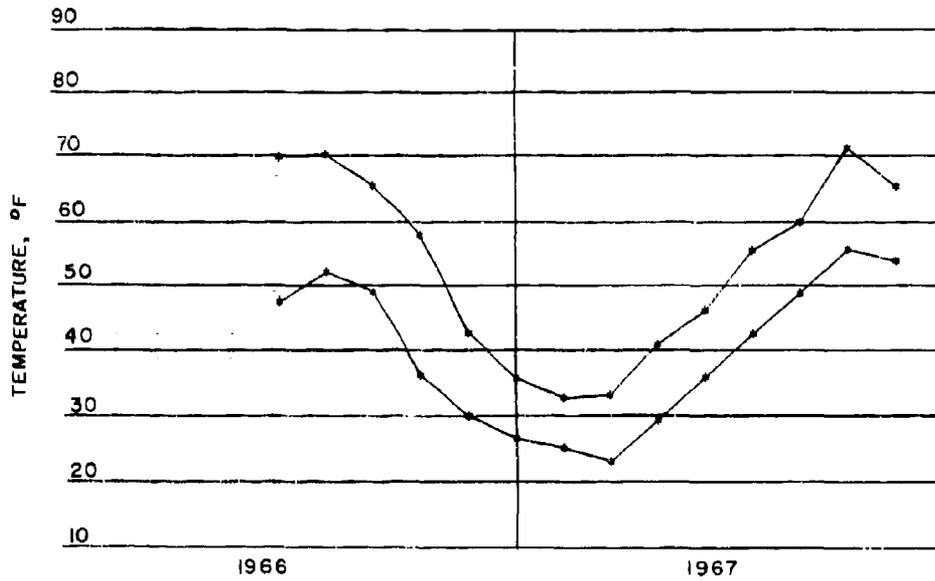


FIG. 7. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazines at NS, Kodiak, Alaska.

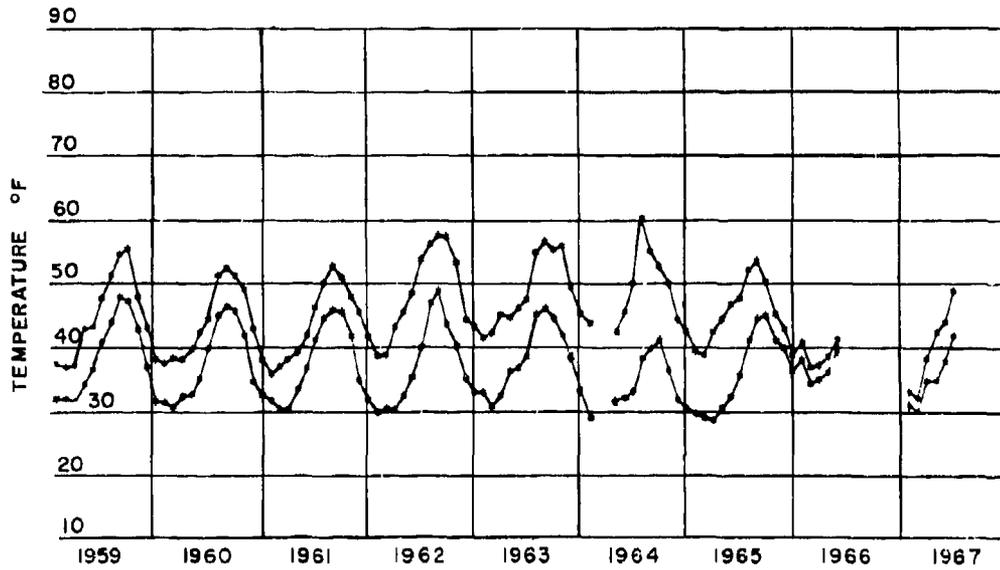


FIG. 8. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NS, Adak, Alaska.

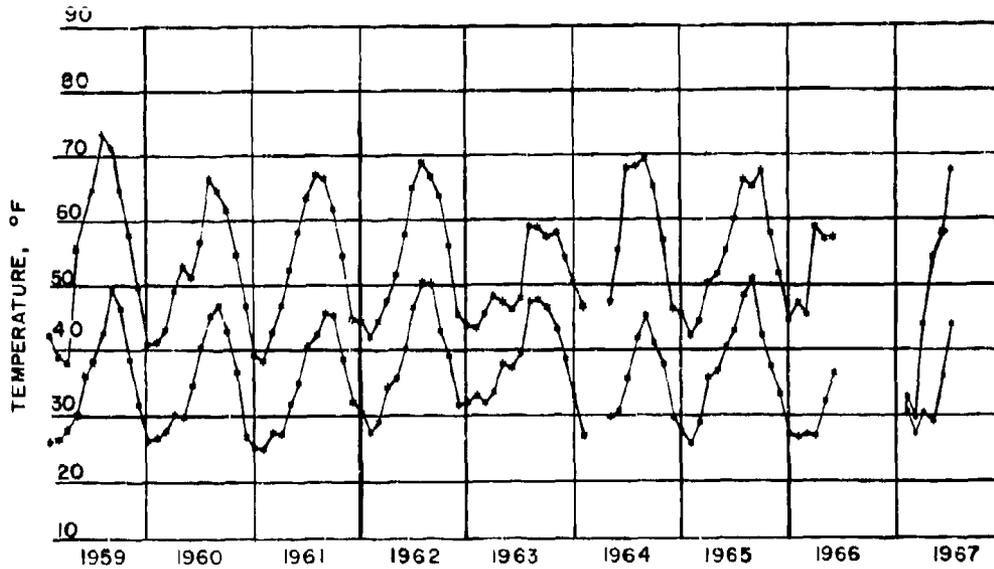


FIG. 9. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazines at NS, Adak, Alaska.

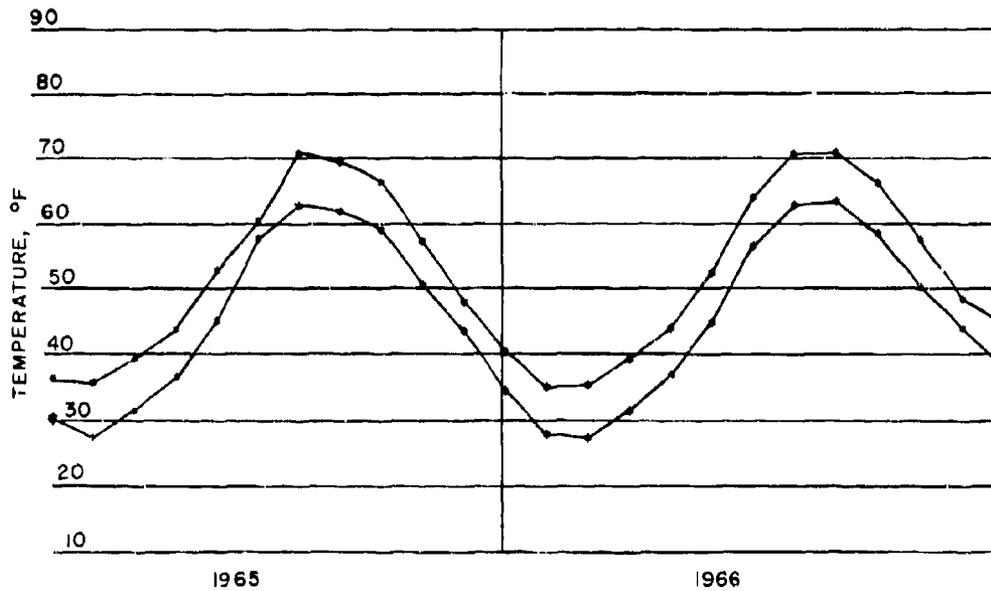


FIG. 10. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NAS, Brunswick, Maine.

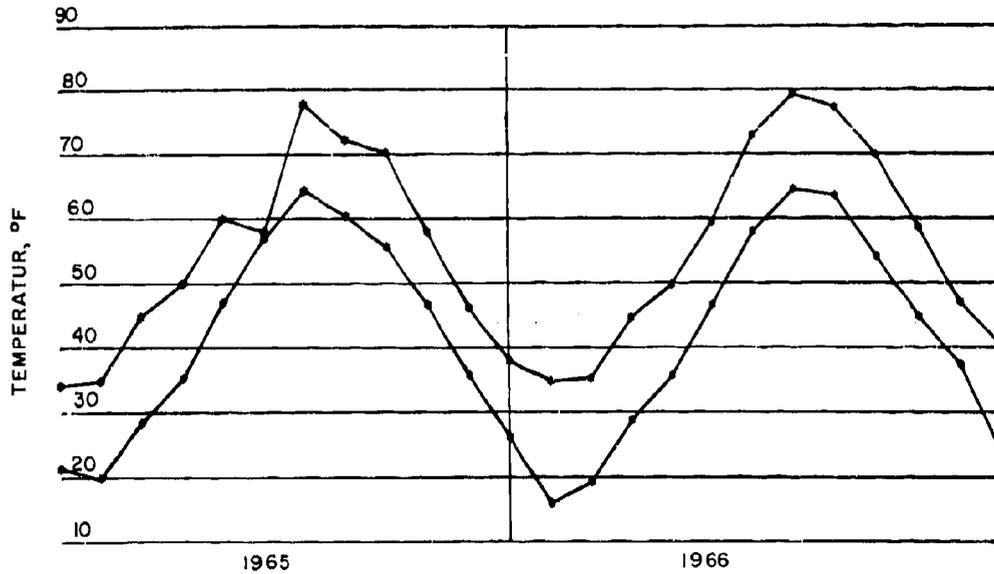


FIG. 11. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazines at NAS, Brunswick, Maine.

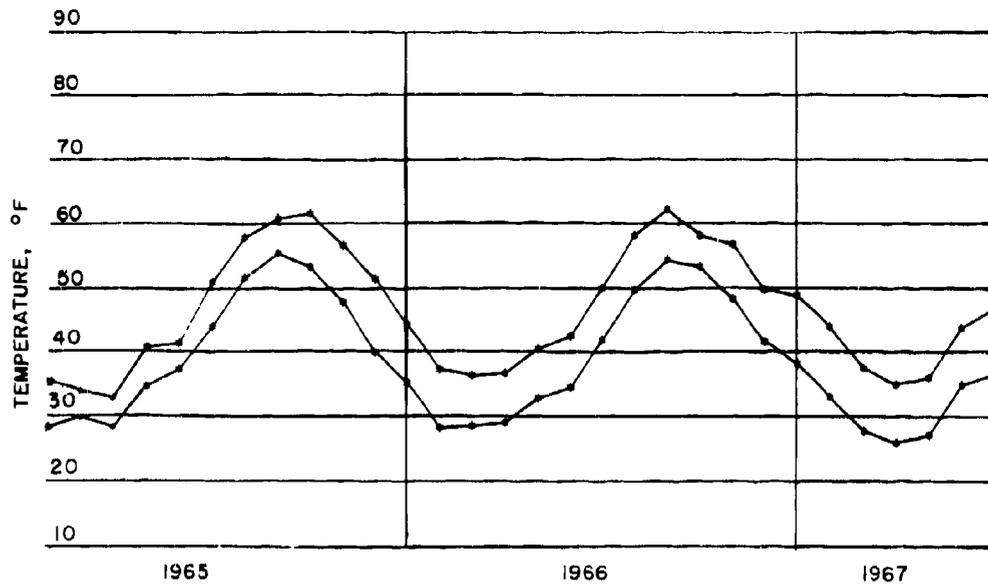


FIG. 12. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NS, Argentia, Newfoundland.

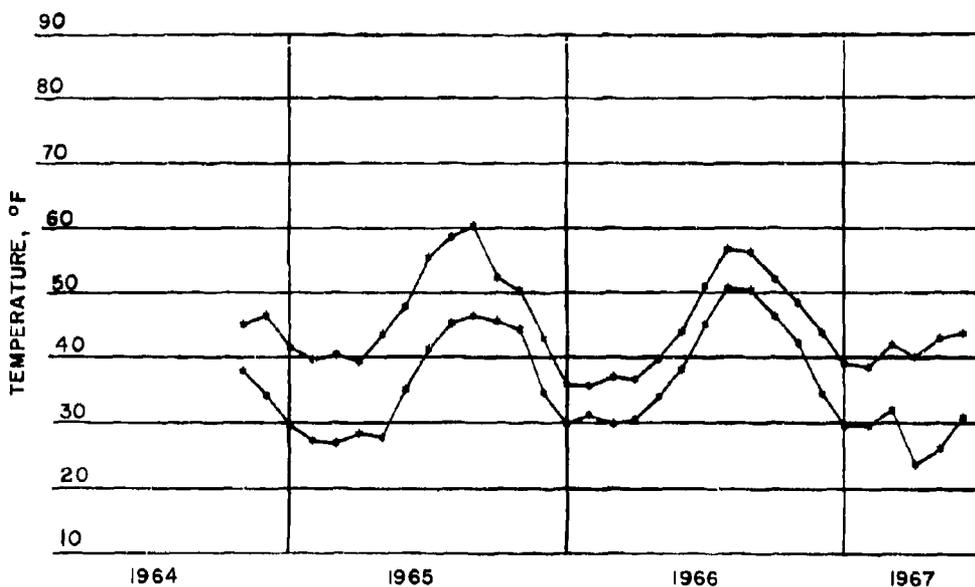


FIG. 13. The Average Maximum and the Average Minimum Temperatures of Earth-Covered Magazines at NS, Keflavik, Iceland.

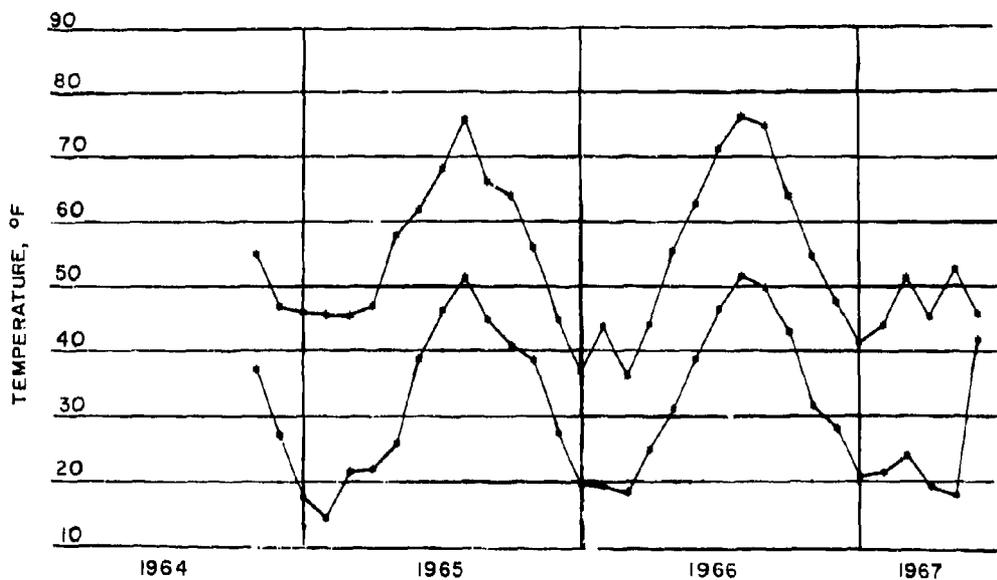


FIG. 14. The Average Maximum and the Average Minimum Temperatures of Non-Earth-Covered Magazines at NS, Keflavik, Iceland.

Figure 1 includes the years 1 January 1965 through 31 October 1967 for the NAD, Bremerton, Washington. Data were missing for the months of May 1965, July 1965, and January 1966.

Figures 2 and 3 include the years 1 January 1966 through 31 June 1967 for the NAS, Seattle, Washington.

Figure 4 includes the years March 1956 through July 1967 of earth-covered magazines for the U. S. Army, Fort Richardson, Alaska. Although these data appear to be extremely significant since a complete 11-year solar cycle is encompassed, it must be pointed out that the earth-covered magazine temperature from 1956 through 1961 are monthly averages only. Similarly the non-earth-covered magazine temperatures from 1958 through 1961 are monthly averages. Daily temperature measurements for these latter two periods were not available.

Figure 5 includes the years April 1958 through July 1967 of non-earth-covered magazines for Fort Richardson, Alaska.

Figure 6 includes the time interval January 1967 through August 1967 of earth-covered magazines at the NS, Kodiak, Alaska.

Figure 7 includes the time interval July 1966 through August 1967 for non-earth-covered magazines for the NS, Kodiak, Alaska.

Figures 8 and 9 include the time interval between January 1959 through June 1967 for the NS, Adak, Alaska. (Data are missing for February and March of 1964 and June through December of 1966). These data are significant because a time period of 8 years is on record and also because of the geographical location of Adak Island and its small size. Since the island is so small, the data gathered there are considered fairly representative of the extreme exposure that would be experienced on board ships in cold waters there and elsewhere.

Figures 10 and 11 include the time interval between January 1965 through December 1966 for the NAS, Brunswick, Maine.

Figure 12 includes the time interval between January 1965 through June 1967 for the NS, Argentia, Newfoundland.

Figures 13 and 14 include the time interval between October 1964 through May 1967 for the NS, Keflavik, Iceland.

The data from which the plots of Fig. 1 through 14 were taken are included in Appendix D. These data include the number of measured points from which the averages and the standard deviations were computed. The importance of reporting these data and the implications arising therefrom are discussed in Appendix E.

CONCLUSIONS

Assuming that the data are representative of the enclosed air temperatures encountered in the explosive hazard magazines located at NAD, Bremerton, Washington; NAS, Seattle, Washington; Fort Richardson, Alaska; NS, Kodiak, Alaska; NS, Adak, Alaska; NAS, Brunswick, Maine; NS, Argentia, Newfoundland; NS, Keflavik, Iceland; the results indicate that ordnance, explosives, propellants, pyrotechnics, etc., stored in these storage magazines will probably never be subjected to temperatures below -10°F for surface magazines and 0°F for earth-covered magazines (see Appendix D). It can be seen in Fig. 20 through 36 that the data displayed in this report were taken from two types of structures; earth-covered and non-earth-covered. The magazines are of metal and concrete construction. The records indicate a consistent difference in temperature ranges and daily fluctuations between the categories earth-covered and non-earth-covered magazines at a given site. There is a great difference between the outside air temperature and the temperature inside the magazines in all cases. These differences are almost the same regardless of the type of magazine or even whether it is earth-covered or exposed. It appears that any sort of covering protects the ordnance from the ambient extremes.

Parts 1, 2, 3, and 4 of this series of reports have, to a large extent, statistically established that the minimum storage specification air temperature of -65°F is not to be found in the explosive hazard magazines located in the colder regions of the world where Naval stations exist. The data from the U. S. Army Fort Richardson, and Adak, Alaska, encompass a large enough portion of a solar cycle to be of significant importance adequate for the assignment of probable minimum earth-covered storage temperatures. The other six locations generally substantiate the conclusions drawn from Fort Richardson and Adak. This report can be used as a basis for the updating of the covered storage temperature requirements of the Military Specifications under which ordnance are designed.

BLANK PAGE

Appendix A
DATA HANDLING

The procedure for handling the storage temperature data is as follows:

Step 1. The applicable data are key punched onto IBM type cards from the temperature summary sheets as received from the ammunition storage facility as shown in Table 2.

TABLE 2. Punchcard Data.

	Month	Day	Year	Type of magazine	Temp. reading		Storage location
					Low	High	
Example	12	30	64	1AT5	33	37	Adak, Alaska
Card column	3	-----	---8	18-26	36-38	42-44	55-79

Step 2. The punched cards (Step 1) are sorted in the following manner:

- a. Storage location: NAD, Bremerton, Washington; NAS, Seattle, Washington; Fort Richardson, Alaska; NS, Kodiak, Alaska; NS, Adak, Alaska; NAS, Brunswick, Maine; NS, Argentia, Newfoundland; NS, Keflavik, Iceland.
- b. Each group of cards by location into calendar sequence by:
 - (1) Year
 - (2) Month
 - (3) Day

Step 3. The "input deck" consists of: (1) Univac 1108 computer program (450-52), (2) the sorted cards from Step 2, and (3) a "total card" with the number of months of data included in columns 4 and 5. The computer program, 450-52, computes the averages and standard deviations of maximum and minimum temperatures of each month.

Step 4. The resulting output from Step 3 consists of the output deck with averages and standard deviations of maximum and minimum temperatures punched in cards, as shown in Fig. 15; microfilms

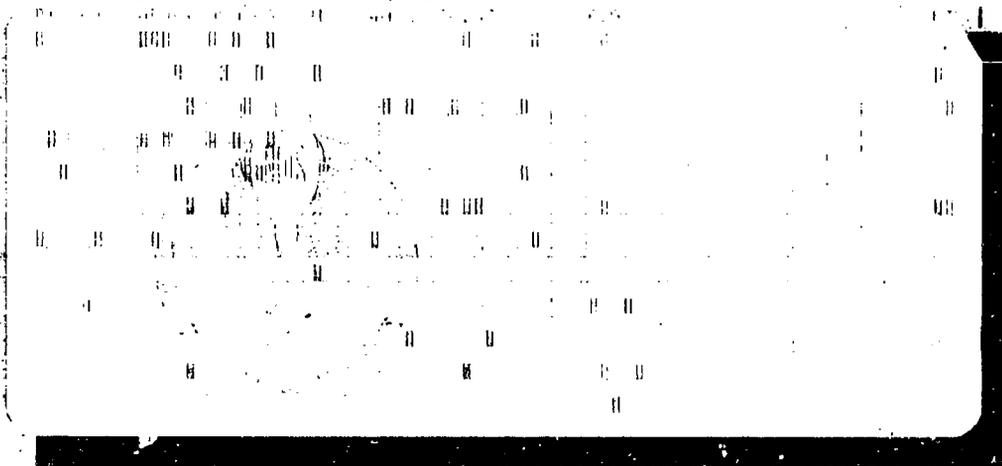


FIG. 15. Typical \bar{x} , s Card.

containing the raw data for each month, as shown in Fig. 16; and microfilms containing data for each month, as sorted in Step 2, that are processed by the computer, as shown in Fig. 17.

RAW DATA (TEMPERATURES)
ADAK, ALASKA

DATE	MAG.NO.	LO	HI												
120464	2XC2	32.	50.	120464	1AT7	16.	55.	120464	1AT8	35.	37.	120464	1AT5	26.	48.
120464	1AT6	24.	45.	120464	2XC5	32.	50.	120464	1AT4	36.	38.	120464	1AT3	37.	42.
120464	1HT2	35.	42.	120464	1HT1	37.	37.	121164	2XC2	34.	38.	121164	1AT7	35.	38.
121164	1AT6	35.	35.	121164	1AT5	15.	55.	121164	1AT6	26.	26.	121164	2XC5	31.	47.
121164	1AT4	15.	55.	121164	1AT3	35.	36.	121164	1HT1	30.	37.	121164	1HT2	29.	35.
121664	2XC2	35.	40.	121664	1AT7	36.	36.	121664	1AT8	35.	42.	121664	1AT5	20.	56.
121664	1AT6	24.	32.	121664	2XC5	34.	40.	121664	1AT4	17.	56.	121664	1AT3	40.	44.
121664	1HT2	35.	35.	121664	1HT1	33.	37.	122564	2XC2	39.	40.	122564	1AT7	36.	38.
122564	1AT6	35.	40.	122564	1AT5	20.	56.	122564	1AT6	22.	25.	122564	2XC5	35.	45.
122564	1AT4	25.	56.	122564	1AT3	35.	40.	122564	1HT2	35.	40.	122564	1HT1	35.	40.

FIG. 16. Raw Data on Microfilm.

LOW TEMPERATURE
 DATE = 1964 LOCATION = ADAK, ALASKA
 N = 40 MEAN = 30.37 STANDARD DEVIATION = 6.988 NO.OVER 90 = 0 MAX = 40.
 NO. UNDER 90 = 0 NO. UNDER 10 = 0 NO. UNDER 0 = 0 MIN = 19.
 32. 16. 35. 26. 24. 32. 36. 37. 35. 37. 34. 35. 35. 18. 26. 31. 15. 38. 30.
 29. 33. 36. 35. 20. 24. 34. 17. 40. 35. 33. 33. 36. 35. 20. 22. 35. 25. 35.
 35. 35.

FIG. 17. Data on Microfilm.

Step 5. The output deck created in Step 4 is reproduced on aperture cards. The microfilms of Step 4 are cut in segments and mounted on aperture cards as shown in Fig. 18 and 19.

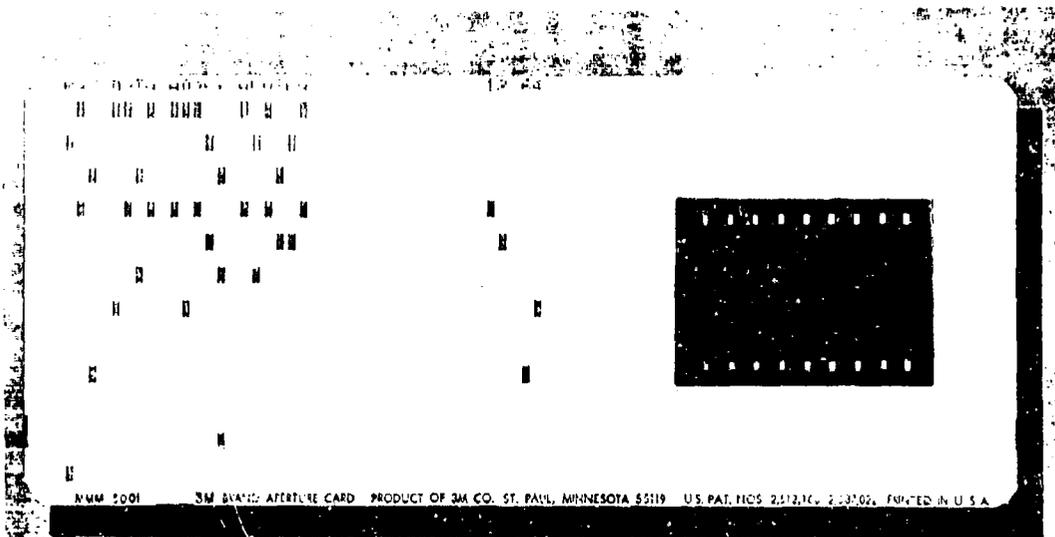


FIG. 18. Aperture Card With Microfilm Insert of Raw Data.

Step 6. The output deck is assembled for another Univac 1108 computer program (420-053) and fed into the computer. The output from the computer is a curve such as that illustrated in Fig. 1 which plots the average maximum and minimum temperatures for the effective dates of the output deck knowledge. The microfilm of this curve is also mounted on an aperture card.

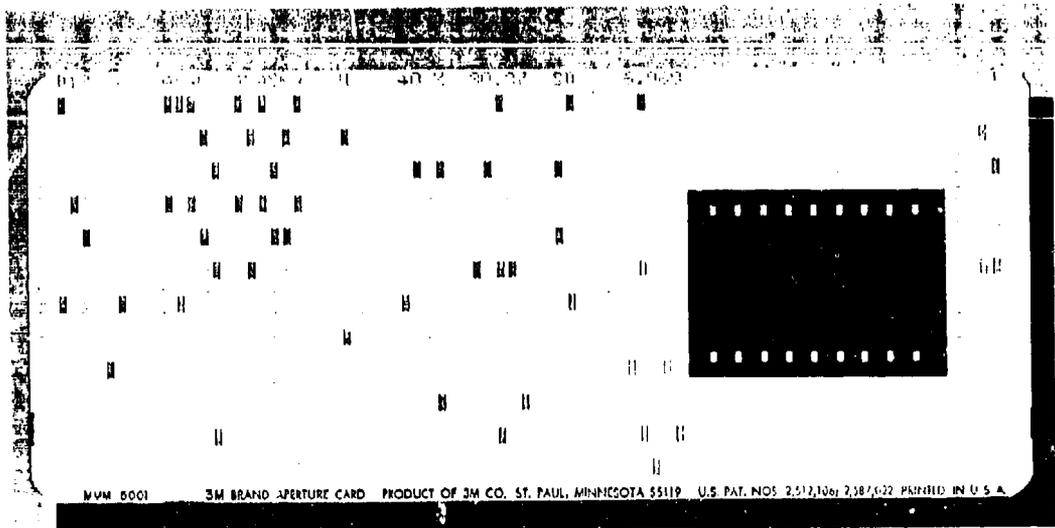


FIG. 19. Aperture Card With Microfilm Insert of Data
Used by the Computer.

Appendix B

CLASSIFICATION OF MAGAZINES

Storage magazines differ in construction and deployment for the type of ammunition that is to be stored. The storage magazines from which the temperature data have been collected differ greatly in that their classifications range from Explosive Hazard Magazines to store-houses. Their construction, labeling, maintenance, etc., and the frequency at which temperature measurements were taken are in accordance with the document "Ammunition Ashore Handling, Stowing, and Shipping", OP5, Vol. 1, second revision. The letter designations, intact as established by OP5, are presented in Table 3, so that the reader should have no difficulty in distinguishing between types of magazines that are found at the specified locations in the cold regions.

In order to indicate the type of magazine, OP5 requires that the letter T is added if the magazine is earth-covered and barracaded; the letter C is added if the magazine is earth-covered but the door is not barracaded; and the letter S is added if the magazine is not earth-covered but is barracaded.

TABLE 3. Storage Magazine Description.

L to N Inclusive and Y Fire Hazard--Powder (Bulk, Semifixed or Bag Ammunition), Pyrotechnics, Ignition Fuzes and Primers, Small Arms, Smoke Drums, Chemical Ammunition

Dimensions (nominal)	Normal explosive limit	Letter designator
50' x 100' -----	500,000 lbs -----	L
25' x 80' triple arch	500,000 lbs -----	L
52' dome (Corbetta type)	500,000 lbs -----	D
50' x 60' -----	300,000 lbs -----	M
30' x 50' -----	125,000 lbs -----	N
25' x 48' -----	125,000 lbs -----	N
25' x 40' -----	125,000 lbs -----	N
Miscellaneous or non- standard size	Dependent upon location, size, and construction	Y

TABLE 3. (Contd).

P and Z Missile Hazard--Projectile and Fixed Ammunition

Dimensions (nominal)	Maximum explosive limit	Letter designator
50' x 100' -----	143,000 lbs -----	P
25' x 80' triple arch	143,000 lbs (total for three arches)	P
52' dome (Corbetta type)	143,000 lbs -----	D
Miscellaneous or non- standard size	143,000 lbs -----	Z

A to K Inclusive and W, and X Explosion Hazard--High Explosive
(Bulk, Depth Charges, Mines, Warheads, Bombs, etc.) Fuzes,
Detonators, Exploders, Black Powder

Dimensions (nominal)	Normal use	Normal explosive limit	Letter designator
25' x 80' arch type (igloo)	High explosives	250,000 lbs	A
25' x 50' arch type (igloo)	High explosives	143,000 lbs	B
25' x 40' arch type (igloo)	High explosives	143,000 lbs	B
39' x 44' or 32' x 44' (war- head type)	High explosives	250,000 lbs	W
12' x 17' (box type)	Black powder	20,000 lbs	E
Miscellaneous or nonstandard size	High explosives	Dependent upon size, location, and con- struction	X
25' x 20' arch type (igloo)	Fuze and deto- nator	70,000 lbs	F
Dimensions vary (gallery or tunnel type)	High explosives	250,000 lbs	G

TABLE 3. (Contd).

Dimensions (nominal)	Normal use	Normal explosive limit	Letter designator
10' x 14'	Fuze and deto- nator	15, 000 lbs	H
10' x 7'	Fuze and deto- nator	7, 500 lbs	H
6' x 8'8" (keyport type)	High explosives	4, 000 lbs	K

Miscellaneous Magazines

Dimensions (nominal)	Type	Letter designator
25' x 68' -----	Smoke drum type -----	SD
25' x 34' -----	Smoke drum type -----	SD
25' x 51' -----	Smoke drum type -----	SD
	All inert storehouses	SH

Type of hazard	Letter designator
Explosive hazard magazine	X
Fire hazard magazine	Y
Missile hazard magazine	Z

NAVAL AMMUNITION DEPOT, BREMERTON, WASHINGTON

There are 315 storage magazines from which temperature data have been collected. All of the magazines are earth covered with letter designations AT, PC (Fig. 20), ET, BT, FC, KC (Fig. 21), HT and XC.

NAVAL AIR STATION, SEATTLE, WASHINGTON

There are eight storage magazines from which temperature data have been collected. Six magazines are earth covered with letter designations BTX, NT, ZT (Fig. 22), and YT. Two are non-earth-covered magazines with letter designators X (Fig. 23) and N.



FIG. 20. NAD, Bremerton, Washington, Magazine 12-PC-16.
(Typical of AT and PC magazines at Bremerton.)

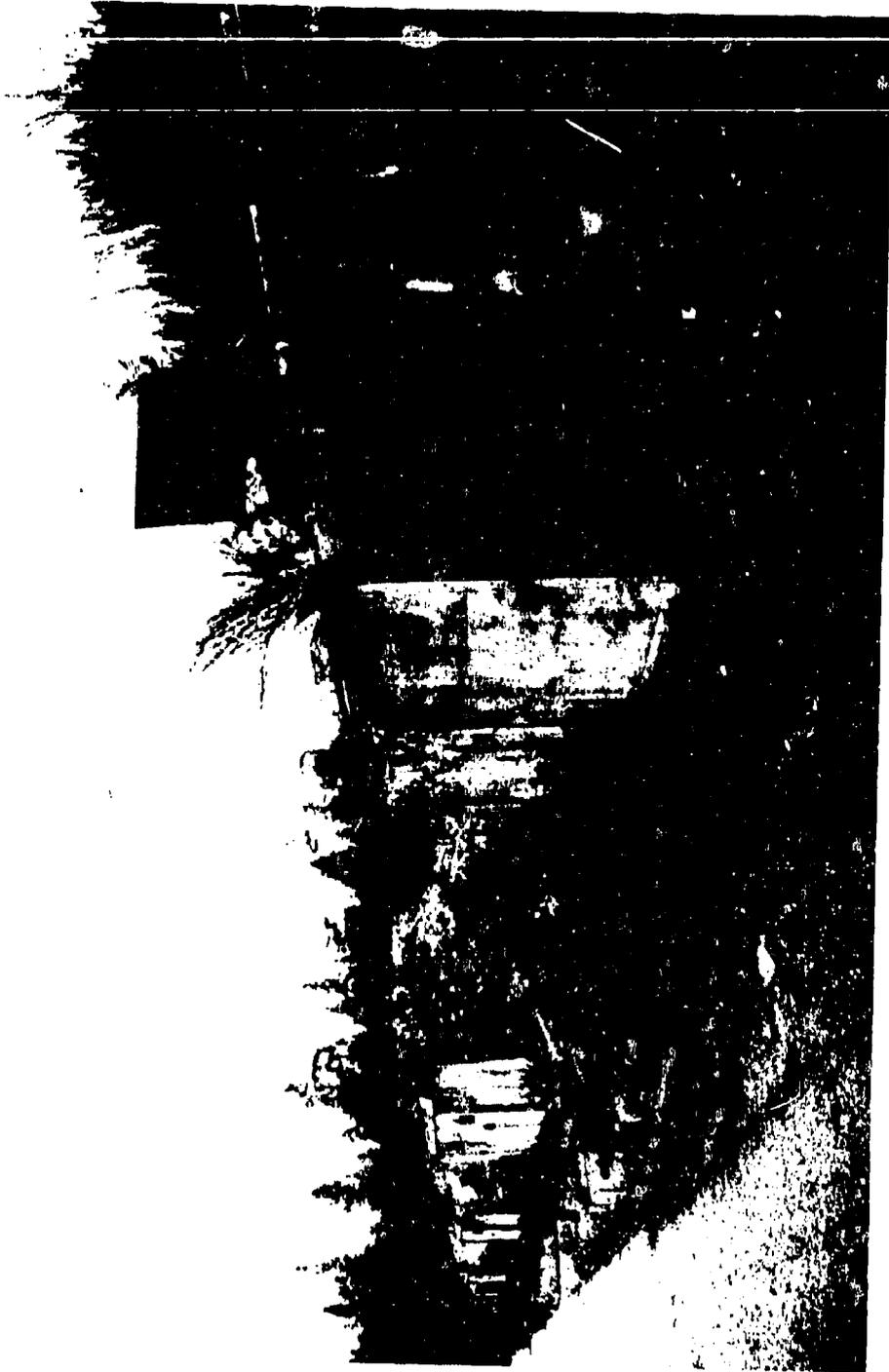


FIG. 21. NAD, Bremerton, Washington, Magazine 9-KC-38.

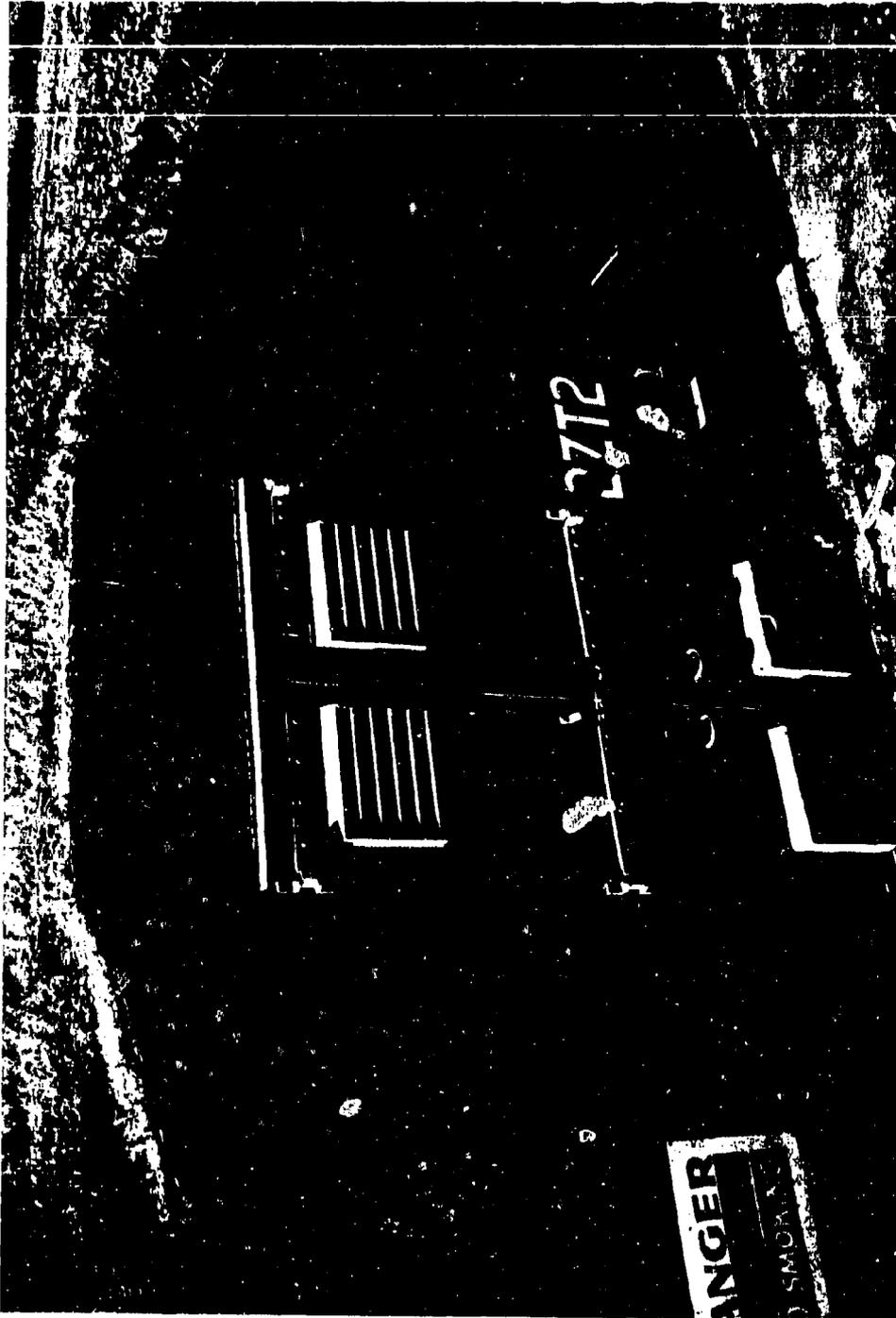


FIG. 22. NAS, Seattle, Washington, Magazine 2ZT2.
(Typical of earth-covered magazines at Seattle.)

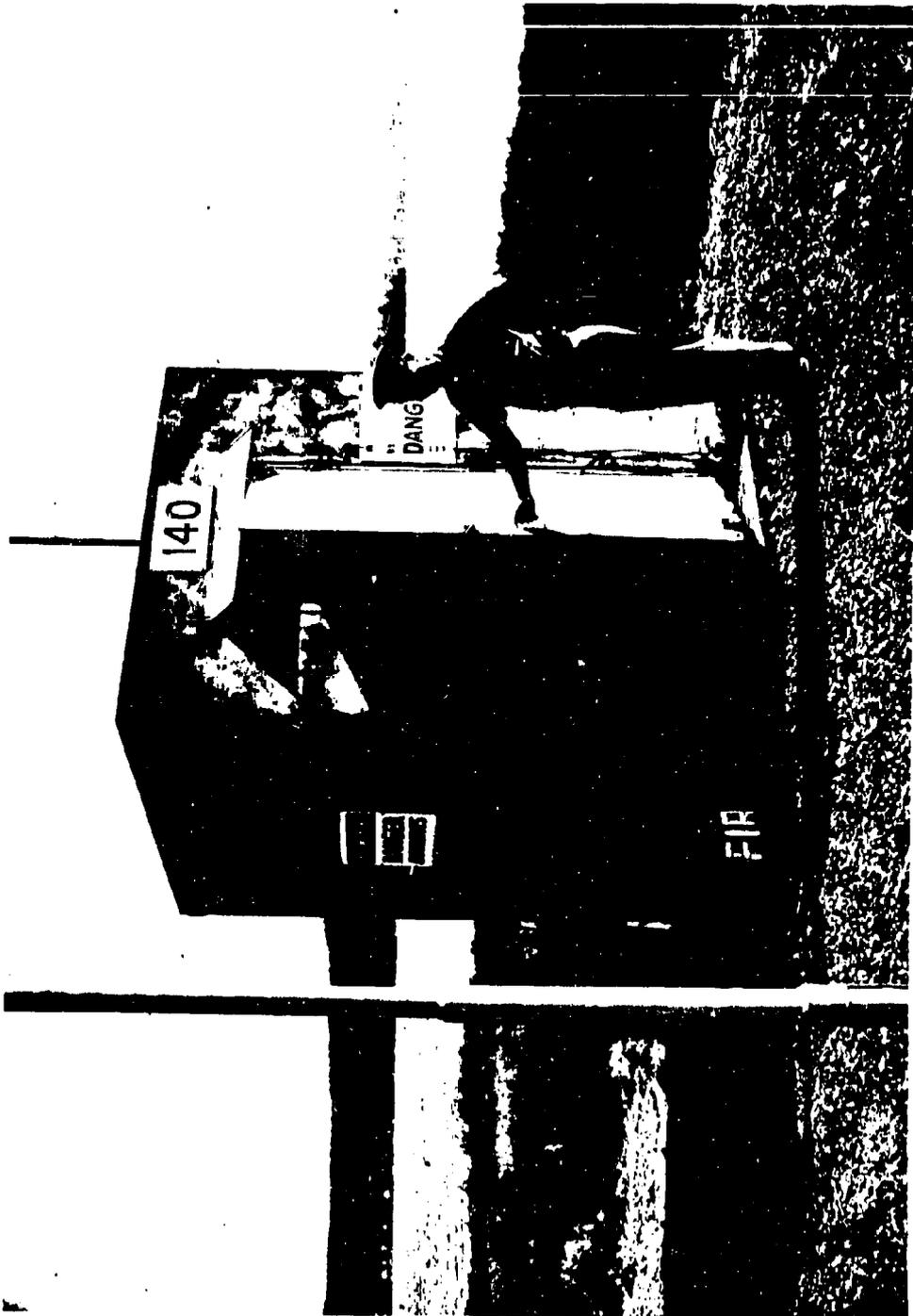


FIG. 23. NAS, Seattle, Washington, Magazine IX3.

FORT RICHARDSON, ALASKA (U. S. ARMY)

The magazine numbered D 27 (Fig. 24) is the only earth-covered magazine from which data have been collected. This magazine is of concrete arched construction, size approximately 26 by 60 by 12 feet (W x L x H), double steel doors, and is earth covered. The magazine numbered W-22 (Fig. 25) is the only non-earth-covered magazine from which data have been collected. This magazine is of all concrete construction with the size approximately 65 by 92 by 11 feet (W x L x H).

NAVAL STATION, KODIAK, ALASKA

There are 21 magazines from which temperature data have been collected. Nine magazines are earth covered with letter designations BT and HT (Fig. 26). Twelve magazines are non-earth covered with letter designations X, Y (Fig. 27), XS, and HT (an instance of mis-labeling, see Fig. 28).

NAVAL STATION, ADAK, ALASKA

There are 49 storage magazines from which temperature data have been collected. Thirty-two are earth covered with letter designations XC, AT, AND HT (Fig. 29). Seventeen are non-earth covered with letter designations X, and RS (Fig. 30).

NAVAL AIR STATION, BRUNSWICK, MAINE

There are 24 magazines from which temperature data have been collected. Sixteen are earth covered with letter designations YC, XC, HT, AT, YT, and BT (Fig. 31). Eight are non-earth covered with the letters designations BY, and Y (Fig. 32).

NAVAL STATION, ARGENTIA, NEWFOUNDLAND

There are 34 earth covered magazines from which temperature data have been collected. Their letter designations are BTX, BT (Fig. 33), XC, HT, YC, and ZC (Fig. 34).

NAVAL STATION, KEFLAVIK, ICELAND

There are 27 storage magazines from which temperature data have been collected. Nine are earth covered with letter designations XT (Fig. 35), VC and ZC. Eighteen are non-earth-covered magazines with letter designations X, Y (Fig. 36), and XS.



FIG. 24. Fort Richardson, Alaska, Magazine D27.



FIG. 25. Fort Richardson, Alaska, Magazine W-22.



FIG. 26. NS, Kodiak, Alaska, Magazine 4HT7.
(Typical of earth-covered magazines at Kodiak.)



FIG. 27. NS, Kodiak, Alaska, Magazine 5Y5.
(Typical of non-earth-covered magazines at Kodiak.)



FIG. 28. NS, Kodiak, Alaska, Magazine 4HT2.
(An example of structure mislabeling.)



FIG. 29. NS, Adak, Alaska, Magazine IHT2.
(One of the better constructed earth-covered magazines.)



FIG. 30. NS, Adak, Alaska, Magazine 3X8.
(One of the poorest non-earth-covered magazines.)



FIG. 31. NAS, Brunswick, Maine, Magazine 4BT6.
(Typical of earth-covered magazines at Brunswick.)

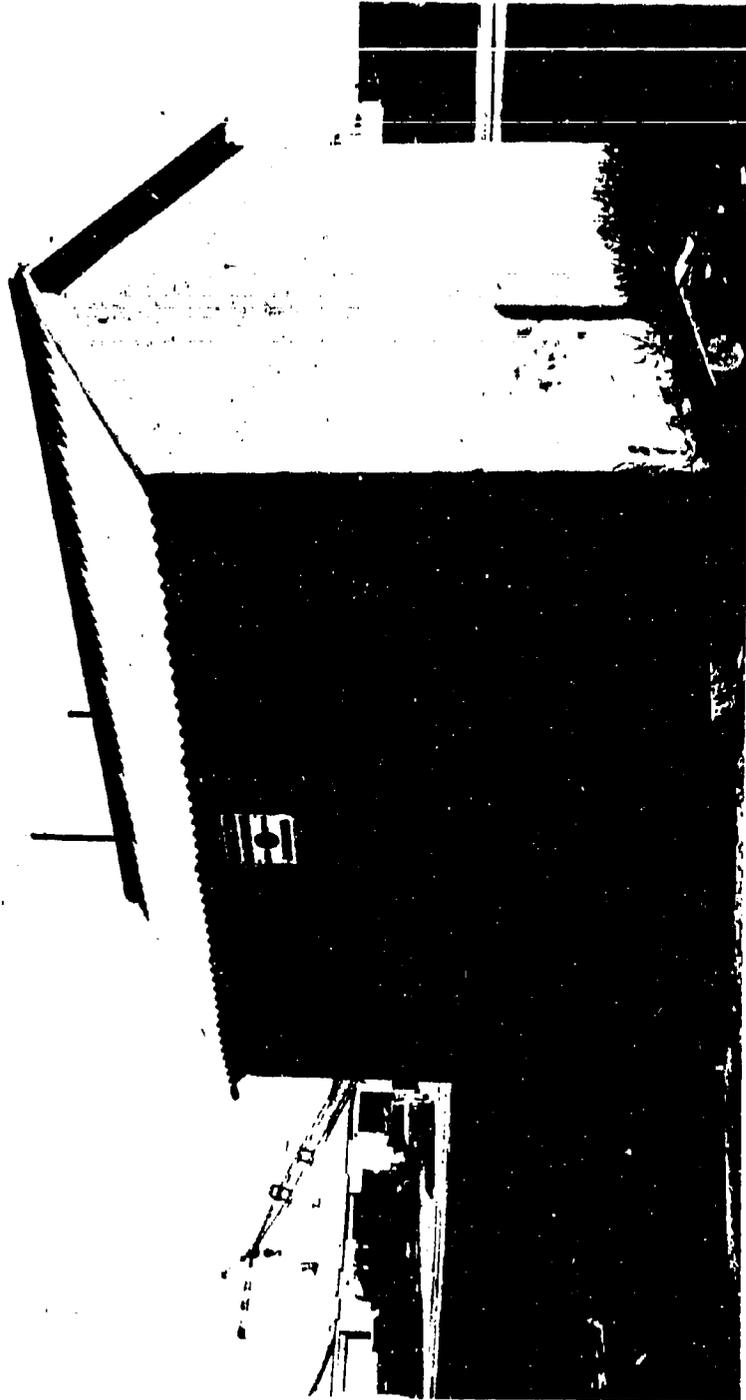


FIG. 32. NAS, Brunswick, Maine, Magazine 1-Y-4 A and B.
(Typical of non-earth-covered magazines at Brunswick.)



FIG. 33. NS, Argentina, Newfoundland, Magazine 6BT1.
(Typical of earth-covered magazines at Argentina.)



FIG. 34. NS, Argentina, Newfoundland, Magazine 5ZC9.
(Typical of earth-covered magazines at Argentina.)



FIG. 35. NS, Keflavik, Iceland, Magazine 2XT8.
(Typical of earth-covered magazines at Keflavik.)



FIG. 36. NS, Keflavik, Iceland, Magazine 3Y9.
(Typical of non-earth-covered magazines at Keflavik.)

BLANK PAGE

Appendix C

MONTHLY TEMPERATURE SUMMARIES

The monthly breakdown of the summary of results for each location is presented in Tables 4 through 17. The first row of each table contains column headings. Reading from the left, the first two-column headings "Year" and "Month" are self explanatory. "N" indicates the number of temperature readings taken during the month, the fourth through the sixth column labeled "The Number of Data Points Less Than or Equal to 20, 10, and 0°F" is self explanatory. "Min Temp" indicates the lowest temperature that was recorded during the month.

TABLE 4. Summary of Results, Earth-Covered Magazines,
NAD, Bremerton, Washington.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1965	01	34	0	0	0	30
1965	02	67	0	0	0	35
1965	03	66	0	0	0	40
1965	04	196	0	0	0	32
1965	06	195	0	0	0	38
1965	08	212	0	0	0	25
1965	09	207	0	0	0	46
1965	10	218	0	0	0	36
1965	11	71	0	0	0	50
1965	12	162	0	0	0	30
1966	02	167	0	0	0	30
1966	03	230	0	0	0	35
1966	04	219	0	0	0	35
1966	05	229	0	0	0	40
1966	06	142	0	0	0	45
1966	07	84	0	0	0	48
1966	08	7	0	0	0	52
1966	09	60	0	0	0	38
1966	10	178	0	0	0	40
1966	11	83	0	0	0	48
1966	12	52	0	0	0	40
1967	01	121	0	0	0	35
1967	02	82	0	0	0	40
1967	03	84	0	0	0	40
1967	04	86	0	0	0	40
1967	05	145	0	0	0	40
1967	06	194	0	0	0	40
1967	07	175	0	0	0	40
1967	08	228	0	0	0	45
1967	09	95	0	0	0	42
1967	10	162	0	0	0	42

TABLE 5. Summary of Results, Earth-Covered Magazines,
NAS, Seattle, Washington.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1966	01	16	0	0	0	35
1966	02	16	0	0	0	36
1966	03	20	0	0	0	35
1966	04	16	0	0	0	40
1966	05	14	0	0	0	45
1966	06	20	0	0	0	50
1966	07	17	0	0	0	56
1966	08	14	0	0	0	59
1966	09	21	0	0	0	47
1966	10	18	0	0	0	45
1966	11	25	0	0	0	41
1966	12	15	0	0	0	38
1967	01	20	0	0	0	31
1967	02	10	0	0	0	32
1967	03	15	0	0	0	40
1967	04	19	0	0	0	37
1967	05	25	0	0	0	40
1967	06	20	0	0	0	52

TABLE 6. Summary of Results, Non-Earth-Covered Magazines,
NAS, Seattle, Washington.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1966	01	12	0	0	0	28
1966	02	11	0	0	0	30
1966	03	13	0	0	0	30
1966	04	9	0	0	0	38
1966	05	9	0	0	0	42
1966	06	14	0	0	0	46
1966	07	9	0	0	0	50
1966	08	7	0	0	0	58
1966	09	7	0	0	0	40
1966	10	8	0	0	0	42
1966	11	10	0	0	0	39
1966	12	6	0	0	0	36
1967	01	8	0	0	0	40
1967	02	4	0	0	0	36
1967	03	6	0	0	0	41
1967	04	8	0	0	0	35
1967	05	10	0	0	0	42
1967	06	8	0	0	0	56

TABLE 7. Summary of Results, Earth-Covered Magazines,
Fort Richardson, Alaska.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1962	01	22	0	0	0	24
1962	02	19	0	0	0	24
1962	03	22	0	0	0	25
1962	04	21	0	0	0	30
1962	05	22	0	0	0	32
1962	06	21	0	0	0	30
1962	07	21	0	0	0	50
1962	08	23	0	0	0	54
1962	09	19	0	0	0	42
1962	10	23	0	0	0	38
1962	11	19	0	0	0	24
1962	12	18	0	0	0	25
1963	01	22	0	0	0	22
1963	02	19	0	0	0	24
1963	03	21	0	0	0	26
1963	04	22	0	0	0	27
1963	05	21	0	0	0	32
1963	06	20	0	0	0	41
1963	07	21	0	0	0	47
1963	08	22	0	0	0	42
1963	09	20	0	0	0	48
1963	10	23	0	0	0	35
1963	11	17	1	0	0	20
1963	12	21	0	0	0	23
1964	01	22	0	0	0	22
1964	02	19	0	0	0	22
1964	03	22	0	0	0	23
1964	04	22	0	0	0	26
1964	05	20	0	0	0	31
1964	06	21	0	0	0	36
1964	07	21	0	0	0	46
1964	08	21	0	0	0	48
1964	09	22	0	0	0	45
1964	10	22	0	0	0	36
1964	11	18	0	0	0	31
1964	12	21	0	0	0	24

TABLE 7. (Contd.)

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1965	01	20	1	0	0	20
1965	02	19	0	0	0	21
1965	03	23	0	0	0	22
1965	04	22	0	0	0	30
1965	05	19	0	0	0	32
1965	06	22	0	0	0	39
1965	07	20	0	0	0	45
1965	08	27	0	0	0	46
1965	09	22	0	0	0	44
1965	10	21	0	0	0	34
1965	11	20	0	0	0	27
1965	12	21	0	0	0	22
1966	01	21	2	0	0	20
1966	02	19	0	0	0	22
1966	03	23	11	0	0	18
1966	04	21	0	0	0	28
1966	05	21	0	0	0	33
1966	06	22	0	0	0	39
1966	07	20	0	0	0	49
1966	08	23	0	0	0	51
1966	09	21	0	0	0	45
1966	10	21	0	0	0	34
1966	11	20	0	0	0	29
1966	12	21	0	0	0	21
1967	01	21	5	0	0	20
1967	02	19	9	0	0	19
1967	03	23	0	0	0	22
1967	04	20	0	0	0	24
1967	05	22	0	0	0	29
1967	06	22	0	0	0	37
1967	07	19	0	0	0	48

TABLE 8. Summary of Results, Non-Earth-Covered Magazines,
Fort Richardson, Alaska.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1962	01	22	22	9	0	2
1962	02	19	12	4	0	8
1962	03	22	12	0	0	14
1962	04	21	0	0	0	24
1962	05	22	0	0	0	38
1962	06	21	0	0	0	49
1962	07	21	0	0	0	53
1962	08	23	0	0	0	54
1962	09	19	0	0	0	42
1962	10	23	0	0	0	31
1962	11	19	6	3	0	6
1962	12	18	10	6	2	-4
1963	01	20	9	5	5	-9
1963	02	19	8	1	0	10
1963	03	21	1	0	0	16
1963	04	22	1	0	0	20
1963	05	21	0	0	0	42
1963	06	20	0	0	0	50
1963	07	21	0	0	0	56
1963	08	22	0	0	0	54
1963	09	20	0	0	0	48
1963	10	23	1	0	0	19
1963	11	16	7	5	0	1
1963	12	21	8	2	0	3
1964	01	22	20	5	0	3
1964	02	19	11	3	0	5
1964	03	20	10	0	0	12
1964	04	22	0	0	0	23
1964	05	20	0	0	0	32
1964	06	21	0	0	0	51
1964	07	21	0	0	0	43
1964	08	21	0	0	0	46
1964	09	22	0	0	0	45
1964	10	22	0	0	0	22
1964	11	18	3	0	0	14
1964	12	21	21	13	3	-2

TABLE 8. (Contd.)

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1965	01	18	14	7	0	1
1965	02	19	17	3	0	10
1965	03	23	1	0	0	15
1965	04	22	0	0	0	31
1965	05	19	0	0	0	36
1965	06	22	0	0	0	42
1965	07	20	0	0	0	56
1965	08	37	0	0	0	52
1965	09	22	0	0	0	38
1965	10	9	1	0	0	20
1965	11	20	7	0	0	12
1965	12	21	18	6	0	5
1966	01	21	21	12	0	5
1966	02	19	15	2	0	10
1966	03	23	14	0	0	12
1966	04	21	0	0	0	33
1966	05	21	0	0	0	45
1966	06	22	0	0	0	49
1966	07	20	0	0	0	56
1966	08	23	0	0	0	42
1966	09	21	0	0	0	46
1966	10	21	0	0	0	22
1966	11	20	11	0	0	17
1966	12	21	21	13	0	2
1967	01	21	21	5	0	8
1967	02	19	16	6	0	8
1967	03	23	0	0	0	24
1967	04	20	0	0	0	34
1967	05	22	0	0	0	36
1967	06	22	0	0	0	54
1967	07	19	0	0	0	52

TABLE 9. Summary of Results, Earth-Covered Magazines,
NS, Kodiak, Alaska.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1967	01	27	1	0	0	20
1967	02	27	2	0	0	20
1967	03	34	0	0	0	27
1967	04	33	0	0	0	28
1967	05	45	0	0	0	34
1967	06	30	0	0	0	42
1967	07	37	0	0	0	25
1967	08	32	0	0	0	48

TABLE 10. Summary of Results, Non-Earth-Covered Magazines,
NS, Kodiak, Alaska.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1966	07	5	0	0	0	33
1966	08	23	0	0	0	42
1966	09	21	0	0	0	42
1966	10	21	0	0	0	24
1966	11	20	0	0	0	25
1966	12	21	2	0	0	19
1967	01	49	9	0	0	15
1967	02	50	12	0	0	12
1967	03	53	2	0	0	18
1967	04	51	0	0	0	24
1967	05	72	0	0	0	30
1967	06	54	0	0	0	40
1967	07	52	0	0	0	27
1967	08	53	0	0	0	40

TABLE 11. Summary of Results, Earth-Covered Magazines,
NS, Adak, Alaska.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1959	01	56	0	0	0	22
1959	02	60	0	0	0	25
1959	03	71	0	0	0	25
1959	04	65	0	0	0	23
1959	05	66	0	0	0	32
1959	06	65	0	0	0	32
1959	07	69	0	0	0	40
1959	08	58	0	0	0	40
1959	09	54	0	0	0	42
1959	10	52	0	0	0	37
1959	11	50	0	0	0	32
1959	12	57	0	0	0	22
1960	01	50	0	0	0	25
1960	02	49	1	0	0	15
1960	03	57	0	0	0	27
1960	04	48	0	0	0	29
1960	05	47	0	0	0	31
1960	06	53	0	0	0	30
1960	07	44	0	0	0	37
1960	08	51	0	0	0	37
1960	09	47	0	0	0	40
1960	10	45	0	0	0	35
1960	11	50	0	0	0	23
1960	12	48	0	0	0	27
1961	01	32	0	0	0	28
1961	02	39	0	0	0	22
1961	03	25	0	0	0	23
1961	04	40	0	0	0	25
1961	05	48	0	0	0	30
1961	06	48	0	0	0	37
1961	07	42	0	0	0	42
1961	08	53	0	0	0	40
1961	09	45	0	0	0	42
1961	10	49	0	0	0	31
1961	11	52	1	0	0	19
1961	12	47	0	0	0	23

TABLE 11. (Contd.)

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1962	01	52	3	0	0	20
1962	02	45	3	0	0	15
1962	03	48	6	0	0	15
1962	04	48	5	0	0	17
1962	05	53	2	0	0	18
1962	06	47	0	0	0	22
1962	07	46	0	0	0	27
1962	08	56	0	0	0	30
1962	09	47	0	0	0	30
1962	10	56	0	0	0	30
1962	11	48	2	0	0	16
1962	12	49	2	0	0	20
1963	01	58	1	0	0	15
1963	02	48	5	0	0	17
1963	03	49	1	0	0	20
1963	04	52	0	0	0	30
1963	05	56	1	0	0	20
1963	06	48	0	0	0	34
1963	07	53	0	0	0	34
1963	08	52	0	0	0	35
1963	09	49	0	0	0	34
1963	10	56	0	0	0	34
1963	11	37	0	0	0	30
1963	12	39	0	0	0	24
1964	01	34	1	0	0	20
1964	04	19	0	0	0	25
1964	05	28	1	0	0	20
1964	06	26	0	0	0	21
1964	07	33	0	0	0	22
1964	08	35	0	0	0	22
1964	09	37	0	0	0	27
1964	10	50	1	0	0	20
1964	11	36	4	0	0	13
1964	12	40	6	0	0	15

TABLE 11. (Contd.)

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1965	01	52	6	0	0	12
1965	02	35	3	1	0	10
1965	03	28	3	0	0	15
1965	04	50	6	1	0	10
1965	05	40	5	0	0	18
1965	06	44	2	0	0	20
1965	07	38	0	0	0	25
1965	08	44	0	0	0	30
1965	09	37	0	0	0	32
1965	10	33	0	0	0	34
1965	11	122	0	0	0	30
1965	12	119	0	0	0	25
1966	01	111	2	0	0	20
1966	02	86	0	0	0	24
1966	03	155	0	0	0	23
1966	04	155	1	0	0	20
1966	05	144	0	0	0	31
1967	01	30	0	0	0	24
1967	02	30	0	0	0	23
1967	03	28	0	0	0	25
1967	04	28	0	0	0	24
1967	05	42	0	0	0	30
1967	06	28	0	0	0	34

TABLE 12. Summary of Results, Non-Earth-Covered Magazines,
NS, Adak, Alaska.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1959	01	48	8	0	0	19
1959	02	48	4	0	0	16
1959	03	49	5	0	0	16
1959	04	54	9	0	0	17
1959	05	50	0	0	0	30
1959	06	54	0	0	0	28
1959	07	54	0	0	0	37
1959	08	56	0	0	0	40
1959	09	57	0	0	0	31
1959	10	57	0	0	0	27
1959	11	55	0	0	0	22
1959	12	60	13	0	0	12
1960	01	55	10	0	0	13
1960	02	53	6	2	0	8
1960	03	60	1	0	0	20
1960	04	54	1	0	0	20
1960	05	54	0	0	0	26
1960	06	57	0	0	0	33
1960	07	51	0	0	0	39
1960	08	64	0	0	0	40
1960	09	67	0	0	0	34
1960	10	74	0	0	0	22
1960	11	74	10	0	0	16
1960	12	73	20	0	0	15
1961	01	39	0	0	0	12
1961	02	43	7	0	0	15
1961	03	29	6	0	0	12
1961	04	50	2	0	0	18
1961	05	73	0	0	0	21
1961	06	77	0	0	0	30
1961	07	70	0	0	0	32
1961	08	82	0	0	0	39
1961	09	75	0	0	0	37
1961	10	83	0	0	0	28
1961	11	74	1	0	0	15
1961	12	67	8	0	0	15

TABLE 12. (Contd.)

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1962	01	78	17	0	0	12
1962	02	67	14	0	0	15
1962	03	71	1	0	0	20
1962	04	82	0	0	0	21
1962	05	92	1	0	0	15
1962	06	88	0	0	0	34
1962	07	85	0	0	0	40
1962	08	94	0	0	0	40
1962	09	78	0	0	0	29
1962	10	98	0	0	0	26
1962	11	82	5	0	0	18
1962	12	90	4	0	0	17
1963	01	95	0	0	0	23
1963	02	84	2	0	0	17
1963	03	90	6	0	0	14
1963	04	98	0	0	0	28
1963	05	95	0	0	0	25
1963	06	84	0	0	0	33
1963	07	94	0	0	0	33
1963	08	92	0	0	0	34
1963	09	89	0	0	0	34
1963	10	95	0	0	0	33
1963	11	79	0	0	0	27
1963	12	73	1	0	0	20
1964	01	49	9	0	0	13
1964	04	22	5	0	0	15
1964	05	43	9	0	0	15
1964	06	48	5	0	0	15
1964	07	65	0	0	0	26
1964	08	54	0	0	0	25
1964	09	57	0	0	0	30
1964	10	79	0	0	0	25
1964	11	53	6	1	0	10
1964	12	56	9	0	0	14

TABLE 12. (Contd.)

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1965	01	73	21	1	0	10
1965	02	53	3	2	0	6
1965	03	44	2	0	0	19
1965	04	77	0	0	0	21
1965	05	60	0	0	0	24
1965	06	70	0	0	0	24
1965	07	68	0	0	0	34
1965	08	68	0	0	0	35
1965	09	65	0	0	0	30
1965	10	62	0	0	0	25
1965	11	69	1	0	0	20
1965	12	49	11	0	0	14
1966	01	58	12	0	0	15
1966	02	40	6	0	0	16
1966	03	26	2	0	0	16
1966	04	47	8	0	0	19
1966	05	20	0	0	0	25
1967	01	21	0	0	0	25
1967	02	20	1	0	0	16
1967	03	22	4	1	0	9
1967	04	20	3	2	0	9
1967	05	26	0	0	0	25
1967	06	16	0	0	0	30

TABLE 13. Summary of Results, Earth-Covered Magazines,
NAS, Brunswick, Maine.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1965	01	76	1	0	0	20
1965	02	317	23	1	0	9
1965	03	439	0	0	0	22
1965	04	432	0	0	0	21
1965	05	473	0	0	0	26
1965	06	22	0	0	0	53
1965	07	419	0	0	0	54
1965	08	151	0	0	0	45
1965	09	508	0	0	0	26
1965	10	257	0	0	0	32
1965	11	372	0	0	0	28
1965	12	343	3	0	0	18
1966	01	339	25	2	0	2
1966	02	349	26	1	0	9
1966	03	435	0	0	0	22
1966	04	441	0	0	0	28
1966	05	456	0	0	0	26
1966	06	441	0	0	0	46
1966	07	432	0	0	0	54
1966	08	477	0	0	0	56
1966	09	457	0	0	0	47
1966	10	423	0	0	0	34
1966	11	380	0	0	0	28
1966	12	72	0	0	0	30

TABLE 14. Summary of Results, Non-Earth-Covered Magazines,
NAS, Brunswick, Maine.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1965	01	129	60	29	6	0
1965	02	159	81	37	5	0
1965	03	198	31	0	0	15
1965	04	190	1	0	0	20
1965	05	206	0	0	0	34
1965	06	22	0	0	0	54
1965	07	236	0	0	0	56
1965	08	82	0	0	0	45
1965	09	244	0	0	0	34
1965	10	126	0	0	0	33
1965	11	184	0	0	0	22
1965	12	195	76	13	0	8
1966	01	163	114	69	7	0
1966	02	161	96	47	6	0
1966	03	209	31	0	0	12
1966	04	201	1	0	0	20
1966	05	206	0	0	0	34
1966	06	203	0	0	0	48
1966	07	207	0	0	0	56
1966	08	209	0	0	0	56
1966	09	201	0	0	0	38
1966	10	206	0	0	0	26
1966	11	200	0	0	0	22
1966	12	34	19	1	0	10

TABLE 15. Summary of Results, Earth-Covered Magazines,
NS, Argentia, Newfoundland.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1965	01	8	0	0	0	25
1965	02	1	0	0	0	30
1965	03	2	0	0	0	28
1965	04	14	0	0	0	27
1965	05	6	0	0	0	35
1965	06	124	1	0	0	19
1965	07	192	0	0	0	38
1965	08	61	0	0	0	37
1965	09	69	0	0	0	44
1965	10	50	0	0	0	33
1965	11	58	0	0	0	28
1965	12	63	2	0	0	16
1966	01	34	4	0	0	13
1966	02	41	8	0	0	15
1966	03	54	4	0	0	13
1966	04	38	1	0	0	20
1966	05	39	0	0	0	21
1966	06	56	0	0	0	28
1966	07	56	0	0	0	32
1966	08	73	0	0	0	33
1966	09	60	0	0	0	46
1966	10	57	0	0	0	42
1966	11	61	0	0	0	29
1966	12	52	0	0	0	28
1967	01	39	1	0	0	20
1967	02	14	2	0	0	20
1967	03	35	5	0	0	18
1967	04	19	5	0	0	19
1967	05	34	0	0	0	30
1967	06	10	0	0	0	30

TABLE 16. Summary of Results, Earth-Covered Magazines,
NS, Keflavik, Iceland.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1964	10	9	0	0	0	32
1964	11	20	2	0	0	18
1964	12	22	1	0	0	20
1965	01	20	1	0	0	20
1965	02	9	0	0	0	22
1965	03	44	3	0	0	20
1965	04	24	3	0	0	16
1965	05	36	0	0	0	24
1965	06	45	0	0	0	32
1965	07	36	0	0	0	35
1965	08	27	0	0	0	35
1965	09	36	0	0	0	40
1965	10	27	0	0	0	38
1965	11	27	1	0	0	18
1965	12	45	6	0	0	20
1966	01	25	3	0	0	16
1966	02	36	0	0	0	24
1966	03	45	0	0	0	24
1966	04	27	0	0	0	28
1966	05	34	0	0	0	32
1966	06	48	0	0	0	40
1966	07	30	0	0	0	46
1966	08	35	0	0	0	46
1966	09	19	0	0	0	40
1966	10	24	0	0	0	36
1966	11	22	0	0	0	28
1966	12	11	0	0	0	24
1967	01	20	0	0	0	24
1967	02	20	1	0	0	20
1967	03	30	8	4	0	8
1967	04	20	0	0	0	22
1967	05	9	0	0	0	26

TABLE 17. Summary of Rainy, Non-Farth-Covered Magazines,
NS, Keflavik, Iceland.

YEAR	MO	N	The number of data points less than or equal to			MIN TEMP
			20°F	10°F	0°F	
1964	10	9	0	0	0	32
1964	11	16	6	0	0	14
1964	12	16	12	1	0	9
1965	01	27	26	7	0	6
1965	02	8	6	0	0	16
1965	03	30	13	3	0	4
1965	04	14	4	0	0	20
1965	05	18	0	0	0	30
1965	06	26	0	0	0	38
1965	07	28	0	0	0	40
1965	08	21	0	0	0	30
1965	09	28	0	0	0	32
1965	10	21	0	0	0	24
1965	11	15	3	0	0	15
1965	12	27	15	3	0	10
1966	01	13	9	4	0	6
1966	02	21	17	0	0	12
1966	03	25	8	0	0	20
1966	04	15	1	0	0	20
1966	05	20	0	0	0	30
1966	06	31	0	0	0	38
1966	07	20	0	0	0	48
1966	08	23	0	0	0	42
1966	09	20	0	0	0	38
1966	10	20	0	0	0	26
1966	11	10	0	0	0	22
1966	12	9	3	1	0	7
1967	01	12	6	0	0	12
1967	02	12	3	0	0	20
1967	03	20	10	3	0	6
1967	04	7	4	2	0	10
1967	05	1	0	0	0	42

Appendix D

APPLICABLE STATISTICS

The standard deviation given along with the average maximum and average minimum temperatures is a measure of dispersion (precision, reproducibility, spread, scatter, etc.) of temperatures within the month. If it is assumed that the temperature readings within each month are dispersed normally (Gaussian distribution) then the standard deviation (σ), can easily be used for calculating the percentage of temperature readings that would exceed nominal temperatures. The Gaussian distribution is a group of measurements that is symmetrical about the average. That is, the spread of measurements below and above the average would appear as equally descending bell-shaped curves on either side of the average.¹ Skewness is a term used to define the degree of departure from the symmetrical bell-shaped curve. Figure 37 presents this Gaussian information. The distributions for within-month temperatures differ from month to month in that the skewness of these distributions differ. However, the skewness is never so extreme that the assumption of normality, which can easily provide the prediction of approximate percentage points, can be discarded.

Temperature averages for the eight storage sites under consideration in this report are given in Tables 18 through 31. An explanation of the symbols is as follows:

- D = date, followed by month and year
- LOC = Location; i. e., NAD, Bremerton, Washington
- N = Number of data points measured
- X = Average
- SD = Standard deviation
- LT = Low temperature (minimum)
- HT = High temperature (maximum)

¹For a Gaussian distribution, the average (μ) minus 1 standard deviation (σ) to the average (μ) plus 1 standard deviation (σ), that is $\mu \pm 1\sigma$, includes approximately 68 percent of all the values of the distribution. Similarly $\mu \pm 2\sigma$ covers 95 percent and $\mu \pm 3\sigma$ covers 99 percent of all the values of the distribution.

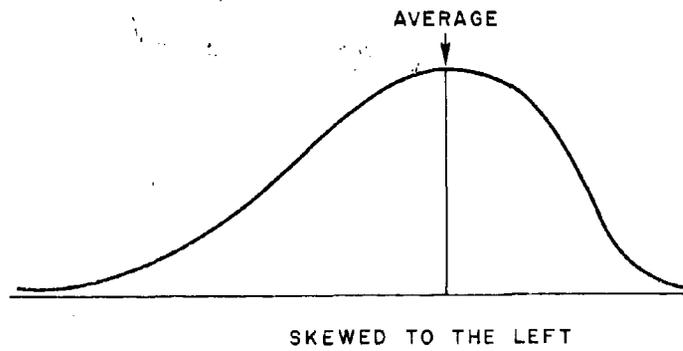
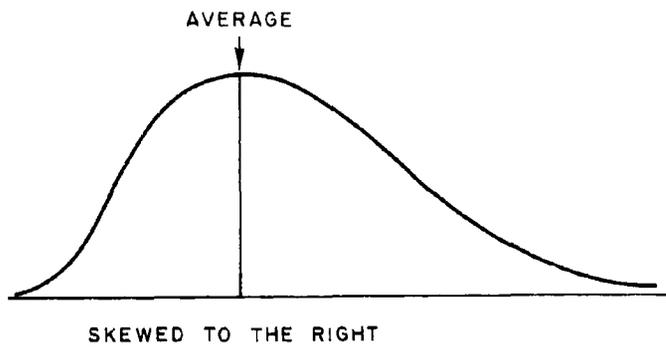
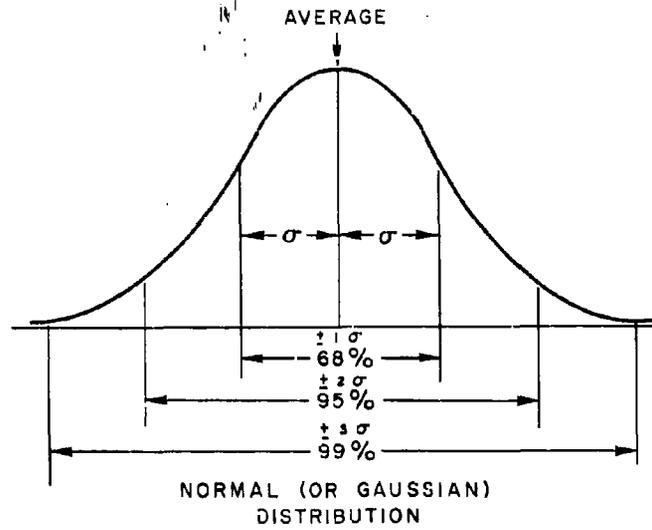


FIG. 37. Gaussian Distribution and Skewed Distributions.

TABLE 18. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines,
Monthly Summaries, NAD, Bremerton, Washington.

D 01 05	NAD, BREMERTON N	34 X	37.97	SD	2.516	LT
D 01 05	NAD, BREMERTON H	34 X	49.71	SD	5.000	HT
D 02 05	NAD, BREMERTON N	67 X	39.48	SD	1.599	LT
D 02 05	NAD, BREMERTON H	67 X	46.06	SD	2.522	HT
D 03 05	NAD, BREMERTON N	66 X	40.68	SD	1.255	LT
D 03 05	NAD, BREMERTON H	66 X	48.74	SD	4.449	HT
D 04 05	NAD, BREMERTON N	196 X	41.93	SD	2.330	LT
D 04 05	NAD, BREMERTON H	196 X	53.13	SD	4.129	HT
D 06 05	NAD, BREMERTON N	195 X	51.96	SD	3.505	LT
D 06 05	NAD, BREMERTON H	195 X	63.07	SD	2.438	HT
D 08 05	NAD, BREMERTON N	212 X	57.62	SD	5.308	LT
D 08 05	NAD, BREMERTON H	212 X	70.94	SD	4.679	HT
D 09 05	NAD, BREMERTON N	207 X	59.66	SD	3.076	LT
D 09 05	NAD, BREMERTON H	207 X	70.02	SD	4.533	HT
D 10 05	NAD, BREMERTON N	215 X	56.08	SD	2.606	LT
D 10 05	NAD, BREMERTON H	215 X	63.72	SD	3.337	HT
D 11 05	NAD, BREMERTON N	71 X	53.31	SD	1.968	LT
D 11 05	NAD, BREMERTON H	71 X	59.38	SD	3.244	HT
D 12 05	NAD, BREMERTON N	162 X	42.91	SD	2.273	LT
D 12 05	NAD, BREMERTON H	162 X	54.81	SD	2.531	HT
D 02 06	NAD, BREMERTON N	167 X	38.56	SD	2.124	LT
D 02 06	NAD, BREMERTON H	167 X	49.43	SD	5.436	HT
D 03 06	NAD, BREMERTON N	230 X	39.73	SD	1.351	LT
D 03 06	NAD, BREMERTON H	230 X	46.17	SD	2.303	HT
D 04 06	NAD, BREMERTON N	219 X	42.01	SD	2.443	LT
D 04 06	NAD, BREMERTON H	219 X	52.80	SD	3.205	HT
D 05 06	NAD, BREMERTON N	229 X	47.16	SD	2.484	LT
D 05 06	NAD, BREMERTON H	229 X	56.67	SD	3.347	HT
D 06 06	NAD, BREMERTON N	142 X	51.45	SD	2.230	LT
D 06 06	NAD, BREMERTON H	142 X	58.23	SD	3.060	HT
D 07 06	NAD, BREMERTON N	84 X	54.80	SD	1.919	LT
D 07 06	NAD, BREMERTON H	84 X	61.65	SD	2.856	HT
D 08 06	NAD, BREMERTON N	7 X	53.57	SD	1.272	LT
D 08 06	NAD, BREMERTON H	7 X	70.00	SD	3.266	HT
D 09 06	NAD, BREMERTON N	60 X	57.58	SD	4.962	LT
D 09 06	NAD, BREMERTON H	60 X	66.52	SD	4.527	HT
D 10 06	NAD, BREMERTON N	178 X	51.96	SD	2.420	LT
D 10 06	NAD, BREMERTON H	178 X	65.38	SD	4.425	HT
D 11 06	NAD, BREMERTON N	93 X	51.02	SD	1.801	LT
D 11 06	NAD, BREMERTON H	93 X	63.95	SD	4.093	HT
D 12 06	NAD, BREMERTON N	52 X	46.21	SD	1.564	LT
D 12 06	NAD, BREMERTON H	52 X	54.92	SD	5.437	HT

TABLE 18. (Contd.)

D 01 67	NAD, BREMERTON	N	121	X	42.36	SD	1.928	LT
D 01 67	NAD, BREMERTON	N	121	X	49.40	SD	4.549	HT
D 02 67	NAD, BREMERTON	N	82	X	42.65	SD	1.211	LT
D 02 67	NAD, BREMERTON	N	82	X	47.89	SD	3.988	HT
D 03 67	NAD, BREMERTON	N	84	X	41.80	SD	1.073	LT
D 03 67	NAD, BREMERTON	N	84	X	48.27	SD	6.691	HT
D 04 67	NAD, BREMERTON	N	86	X	43.28	SD	1.452	LT
D 04 67	NAD, BREMERTON	N	86	X	50.21	SD	3.178	HT
D 05 67	NAD, BREMERTON	N	145	X	44.85	SD	2.161	LT
D 05 67	NAD, BREMERTON	N	145	X	55.29	SD	4.379	HT
D 06 67	NAD, BREMERTON	N	194	X	43.93	SD	4.504	LT
D 06 67	NAD, BREMERTON	N	194	X	64.07	SD	4.720	HT
D 07 67	NAD, BREMERTON	N	175	X	57.47	SD	5.882	LT
D 07 67	NAD, BREMERTON	N	175	X	67.11	SD	4.007	HT
D 08 67	NAD, BREMERTON	N	228	X	61.11	SD	4.876	LT
D 08 67	NAD, BREMERTON	N	228	X	70.44	SD	4.973	HT
D 09 67	NAD, BREMERTON	N	95	X	59.44	SD	5.592	LT
D 09 67	NAD, BREMERTON	N	95	X	66.82	SD	6.413	HT
D 10 67	NAD, BREMERTON	N	102	X	55.05	SD	5.469	LT
D 10 67	NAD, BREMERTON	N	102	X	63.60	SD	7.011	HT

TABLE 19. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines,
Monthly Summaries, NAD, Seattle, Washington.

D 01 66	N.A.S.	SEATTLE N	16 X	39.56	SD	2.159	LT
D 01 66	N.A.S.	SEATTLE N	16 X	45.50	SD	2.066	HT
D 02 66	N.A.S.	SEATTLE N	16 X	40.31	SD	2.915	LT
D 02 66	N.A.S.	SEATTLE N	16 X	46.12	SD	2.473	HT
D 03 66	N.A.S.	SEATTLE N	20 X	40.90	SD	3.768	LT
D 03 66	N.A.S.	SEATTLE N	20 X	50.50	SD	3.663	HT
D 04 66	N.A.S.	SEATTLE N	16 X	45.12	SD	2.680	LT
D 04 66	N.A.S.	SEATTLE N	16 X	52.69	SD	3.877	HT
D 05 66	N.A.S.	SEATTLE N	14 X	49.71	SD	3.124	LT
D 05 66	N.A.S.	SEATTLE N	14 X	60.07	SD	4.531	HT
D 06 66	N.A.S.	SEATTLE N	20 X	56.75	SD	4.529	LT
D 06 66	N.A.S.	SEATTLE N	20 X	63.85	SD	5.040	HT
D 07 66	N.A.S.	SEATTLE N	17 X	59.29	SD	2.756	LT
D 07 66	N.A.S.	SEATTLE N	17 X	67.06	SD	4.007	HT
D 08 66	N.A.S.	SEATTLE N	14 X	62.57	SD	2.533	LT
D 08 66	N.A.S.	SEATTLE N	14 X	67.43	SD	4.569	HT
D 09 66	N.A.S.	SEATTLE N	21 X	59.67	SD	3.941	LT
D 09 66	N.A.S.	SEATTLE N	21 X	67.52	SD	5.250	HT
D 10 66	N.A.S.	SEATTLE N	18 X	53.83	SD	4.567	LT
D 10 66	N.A.S.	SEATTLE N	18 X	61.94	SD	6.830	HT
D 11 66	N.A.S.	SEATTLE N	25 X	48.16	SD	3.210	LT
D 11 66	N.A.S.	SEATTLE N	25 X	52.44	SD	3.477	HT
D 12 66	N.A.S.	SEATTLE N	15 X	44.20	SD	3.167	LT
D 12 66	N.A.S.	SEATTLE N	15 X	50.27	SD	4.682	HT
D 01 67	N.A.S.	SEATTLE N	20 X	42.75	SD	3.323	LT
D 01 67	N.A.S.	SEATTLE N	20 X	45.80	SD	1.609	HT
D 02 67	N.A.S.	SEATTLE N	10 X	41.50	SD	3.689	LT
D 02 67	N.A.S.	SEATTLE N	10 X	46.20	SD	5.329	HT
D 03 67	N.A.S.	SEATTLE N	15 X	42.87	SD	1.506	LT
D 03 67	N.A.S.	SEATTLE N	15 X	44.00	SD	1.309	HT
D 04 67	N.A.S.	SEATTLE N	19 X	43.47	SD	2.590	LT
D 04 67	N.A.S.	SEATTLE N	19 X	51.11	SD	3.650	HT
D 05 67	N.A.S.	SEATTLE N	25 X	50.88	SD	4.275	LT
D 05 67	N.A.S.	SEATTLE N	25 X	55.80	SD	4.708	HT
D 06 67	N.A.S.	SEATTLE N	20 X	59.45	SD	3.748	LT
D 06 67	N.A.S.	SEATTLE N	20 X	67.70	SD	4.725	HT

TABLE 20. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines,
Monthly Summaries, NAS, Seattle, Washington.

D 01 66	N.A.S.	SEATTLE	N	12	X	35.92	SD	4.078	LT
D 01 66	N.A.S.	SEATTLE	N	12	X	45.83	SD	4.174	HT
D 02 66	N.A.S.	SEATTLE	N	11	X	37.27	SD	3.636	LT
D 02 66	N.A.S.	SEATTLE	N	11	X	45.60	SD	5.079	HT
D 03 66	N.A.S.	SEATTLE	N	13	X	38.00	SD	5.627	LT
D 03 66	N.A.S.	SEATTLE	N	13	X	48.15	SD	6.414	HT
D 04 66	N.A.S.	SEATTLE	N	9	X	43.33	SD	4.690	LT
D 04 66	N.A.S.	SEATTLE	N	9	X	52.11	SD	7.356	HT
D 05 66	N.A.S.	SEATTLE	N	9	X	49.67	SD	4.213	LT
D 05 66	N.A.S.	SEATTLE	N	9	X	69.56	SD	5.855	HT
D 06 66	N.A.S.	SEATTLE	N	14	X	56.29	SD	4.714	LT
D 06 66	N.A.S.	SEATTLE	N	14	X	70.86	SD	5.187	HT
D 07 66	N.A.S.	SEATTLE	N	9	X	57.67	SD	4.330	LT
D 07 66	N.A.S.	SEATTLE	N	9	X	72.89	SD	5.645	HT
D 08 66	N.A.S.	SEATTLE	N	7	X	63.43	SD	3.910	LT
D 08 66	N.A.S.	SEATTLE	N	7	X	70.00	SD	8.246	HT
D 09 66	N.A.S.	SEATTLE	N	7	X	59.00	SD	8.907	LT
D 09 66	N.A.S.	SEATTLE	N	7	X	71.71	SD	5.823	HT
D 10 66	N.A.S.	SEATTLE	N	8	X	53.62	SD	6.545	LT
D 10 66	N.A.S.	SEATTLE	N	8	X	66.25	SD	5.651	HT
D 11 66	N.A.S.	SEATTLE	N	10	X	44.90	SD	4.533	LT
D 11 66	N.A.S.	SEATTLE	N	10	X	55.50	SD	3.598	HT
D 12 66	N.A.S.	SEATTLE	N	6	X	40.50	SD	4.461	LT
D 12 66	N.A.S.	SEATTLE	N	6	X	52.50	SD	5.244	HT
D 01 67	N.A.S.	SEATTLE	N	8	X	41.50	SD	1.512	LT
D 01 67	N.A.S.	SEATTLE	N	8	X	48.87	SD	5.222	HT
D 02 67	N.A.S.	SEATTLE	N	4	X	40.60	SD	2.828	LT
D 02 67	N.A.S.	SEATTLE	N	4	X	48.00	SD	5.715	HT
D 03 67	N.A.S.	SEATTLE	N	6	X	43.17	SD	1.329	LT
D 03 67	N.A.S.	SEATTLE	N	6	X	44.33	SD	1.033	HT
D 04 67	N.A.S.	SEATTLE	N	6	X	41.75	SD	3.327	LT
D 04 67	N.A.S.	SEATTLE	N	8	X	50.25	SD	5.230	HT
D 05 67	N.A.S.	SEATTLE	N	10	X	51.10	SD	4.886	LT
D 05 67	N.A.S.	SEATTLE	N	10	X	56.50	SD	5.759	HT
D 06 67	N.A.S.	SEATTLE	N	9	X	60.62	SD	3.204	LT
D 06 67	N.A.S.	SEATTLE	N	8	X	75.25	SD	8.697	HT

TABLE 21. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines,
Monthly Summaries, Ft. Richardson, Alaska.

D 03 56	FT. R. ALASKA	X	24.00	-	LT
D 03 56	FT. R. ALASKA	X	28.00	-	HT
D 04 56	FT. R. ALASKA	X	31.00	-	LT
D 04 56	FT. R. ALASKA	X	35.00	-	HT
D 05 56	FT. R. ALASKA	X	37.00	-	LT
L 05 56	FT. R. ALASKA	X	39.00	-	HT
D 06 56	FT. R. ALASKA	X	46.00	-	LT
D 06 56	FT. R. ALASKA	X	49.00	-	HT
D 07 56	FT. R. ALASKA	X	53.00	-	LT
D 07 56	FT. R. ALASKA	X	57.00	-	HT
D 08 56	FT. R. ALASKA	X	54.00	-	LT
D 08 56	FT. R. ALASKA	X	56.00	-	HT
L 09 56	FT. R. ALASKA	X	50.00	-	LT
D 09 56	FT. R. ALASKA	X	52.00	-	HT
D 10 56	FT. R. ALASKA	X	37.00	-	LT
D 10 56	FT. R. ALASKA	X	40.00	-	HT
D 11 56	FT. R. ALASKA	X	29.00	-	LT
D 11 56	FT. R. ALASKA	X	31.00	-	HT
D 12 56	FT. R. ALASKA	X	25.00	-	LT
D 12 56	FT. R. ALASKA	X	27.00	-	HT
D 01 57	FT. R. ALASKA	X	26.00	-	LT
D 01 57	FT. R. ALASKA	X	27.00	-	HT
D 02 57	FT. R. ALASKA	X	25.00	-	LT
D 02 57	FT. R. ALASKA	X	31.00	-	HT
D 03 57	FT. R. ALASKA	X	29.00	-	LT
D 03 57	FT. R. ALASKA	X	36.00	-	HT
D 04 57	FT. R. ALASKA	X	34.00	-	LT
D 04 57	FT. R. ALASKA	X	45.00	-	HT
D 05 57	FT. R. ALASKA	X	41.00	-	LT
L 05 57	FT. R. ALASKA	X	56.00	-	HT
L 06 57	FT. R. ALASKA	X	54.00	-	LT
D 06 57	FT. R. ALASKA	X	62.00	-	HT
D 07 57	FT. R. ALASKA	X	60.00	-	LT
D 07 57	FT. R. ALASKA	X	62.00	-	HT
D 08 57	FT. R. ALASKA	X	59.00	-	LT
D 08 57	FT. R. ALASKA	X	62.00	-	HT
D 09 57	FT. R. ALASKA	X	53.00	-	LT
L 09 57	FT. R. ALASKA	X	56.00	-	HT
D 10 57	FT. R. ALASKA	X	43.00	-	LT
L 10 57	FT. R. ALASKA	X	45.00	-	HT
D 11 57	FT. R. ALASKA	X	39.00	-	LT
D 11 57	FT. R. ALASKA	X	40.00	-	HT
L 12 57	FT. R. ALASKA	X	31.00	-	LT
D 12 57	FT. R. ALASKA	X	33.00	-	HT

TABLE 21. (Contd.)

D 01 58	FT. R.	ALASKA	X	28.00	-	LT
D 01 58	FT. R.	ALASKA	X	29.00	-	HT
D 02 58	FT. R.	ALASKA	X	27.00	-	LT
D 02 58	FT. R.	ALASKA	X	33.00	-	HT
D 03 58	FT. R.	ALASKA	X	31.00	-	LT
D 03 58	FT. R.	ALASKA	X	38.00	-	HT
D 04 58	FT. R.	ALASKA	X	35.00	-	LT
D 04 58	FT. R.	ALASKA	X	45.00	-	HT
D 05 58	FT. R.	ALASKA	X	41.00	-	LT
D 05 58	FT. R.	ALASKA	X	54.00	-	HT
D 06 58	FT. R.	ALASKA	X	51.00	-	LT
D 06 58	FT. R.	ALASKA	X	57.00	-	HT
D 07 58	FT. R.	ALASKA	X	55.00	-	LT
D 07 58	FT. R.	ALASKA	X	58.00	-	HT
D 08 58	FT. R.	ALASKA	X	55.00	-	LT
D 08 58	FT. R.	ALASKA	X	58.00	-	HT
D 09 58	FT. R.	ALASKA	X	45.00	-	LT
D 09 58	FT. R.	ALASKA	X	53.00	-	HT
D 10 58	FT. R.	ALASKA	X	39.00	-	LT
D 10 58	FT. R.	ALASKA	X	41.00	-	HT
D 11 58	FT. R.	ALASKA	X	32.00	-	LT
D 11 58	FT. R.	ALASKA	X	33.00	-	HT
D 12 58	FT. R.	ALASKA	X	29.00	-	LT
D 12 58	FT. R.	ALASKA	X	30.00	-	HT
D 01 59	FT. R.	ALASKA	X	23.00	-	LT
D 01 59	FT. R.	ALASKA	X	24.00	-	HT
D 02 59	FT. R.	ALASKA	X	26.00	-	LT
D 02 59	FT. R.	ALASKA	X	27.00	-	HT
D 03 59	FT. R.	ALASKA	X	25.00	-	LT
D 03 59	FT. R.	ALASKA	X	35.00	-	HT
D 04 59	FT. R.	ALASKA	X	31.00	-	LT
D 04 59	FT. R.	ALASKA	X	43.00	-	HT
D 05 59	FT. R.	ALASKA	X	39.00	-	LT
D 05 59	FT. R.	ALASKA	X	53.00	-	HT
D 06 59	FT. R.	ALASKA	X	50.00	-	LT
D 06 59	FT. R.	ALASKA	X	57.00	-	HT
D 07 59	FT. R.	ALASKA	X	55.00	-	LT
D 07 59	FT. R.	ALASKA	X	58.00	-	HT
D 08 59	FT. R.	ALASKA	X	55.00	-	LT
D 08 59	FT. R.	ALASKA	X	58.00	-	HT
D 09 59	FT. R.	ALASKA	X	50.00	-	LT
D 09 59	FT. R.	ALASKA	X	52.00	-	HT
D 10 59	FT. R.	ALASKA	X	41.00	-	LT
D 10 59	FT. R.	ALASKA	X	42.00	-	HT
D 11 59	FT. R.	ALASKA	X	34.00	-	LT
D 11 59	FT. R.	ALASKA	X	35.00	-	HT
D 12 59	FT. R.	ALASKA	X	31.00	-	LT
D 12 59	FT. R.	ALASKA	X	32.00	-	HT

TABLE 21. (Contd.)

D 01 60	FT. R. ALASKA	X	28.00	-	LT
D 01 60	FT. R. ALASKA	X	31.00	-	HT
D 02 60	FT. R. ALASKA	X	30.00	-	LT
D 02 60	FT. R. ALASKA	X	32.00	-	HT
D 03 60	FT. R. ALASKA	X	29.00	-	LT
D 03 60	FT. R. ALASKA	X	37.00	-	HT
D 04 60	FT. R. ALASKA	X	35.00	-	LT
D 04 60	FT. R. ALASKA	X	49.00	-	HT
D 05 60	FT. R. ALASKA	X	44.00	-	LT
D 05 60	FT. R. ALASKA	X	54.50	-	HT
D 06 60	FT. R. ALASKA	X	50.00	-	LT
D 06 60	FT. R. ALASKA	X	60.00	-	HT
D 07 60	FT. R. ALASKA	X	57.00	-	LT
D 07 60	FT. R. ALASKA	X	60.00	-	HT
D 08 60	FT. R. ALASKA	X	58.00	-	LT
D 08 60	FT. R. ALASKA	X	59.50	-	HT
D 09 60	FT. R. ALASKA	X	51.00	-	LT
D 09 60	FT. R. ALASKA	X	53.00	-	HT
D 10 60	FT. R. ALASKA	X	43.00	-	LT
D 10 60	FT. R. ALASKA	X	45.50	-	HT
D 11 60	FT. R. ALASKA	X	35.50	-	LT
D 11 60	FT. R. ALASKA	X	38.40	-	HT
D 12 60	FT. R. ALASKA	X	31.00	-	LT
D 12 60	FT. R. ALASKA	X	34.00	-	HT
D 01 61	FT. R. ALASKA	X	27.00	-	LT
D 01 61	FT. R. ALASKA	X	30.00	-	HT
D 02 61	FT. R. ALASKA	X	27.50	-	LT
D 02 61	FT. R. ALASKA	X	30.50	-	HT
D 03 61	FT. R. ALASKA	X	26.00	-	LT
D 03 61	FT. R. ALASKA	X	29.00	-	HT
D 04 61	FT. R. ALASKA	X	32.00	-	LT
D 04 61	FT. R. ALASKA	X	35.00	-	HT
D 05 61	FT. R. ALASKA	X	38.00	-	LT
D 05 61	FT. R. ALASKA	X	40.20	-	HT
D 06 61	FT. R. ALASKA	X	47.00	-	LT
D 06 61	FT. R. ALASKA	X	50.00	-	HT
D 07 61	FT. R. ALASKA	X	55.00	-	LT
D 07 61	FT. R. ALASKA	X	62.00	-	HT
D 08 61	FT. R. ALASKA	X	56.00	-	LT
D 08 61	FT. R. ALASKA	X	66.00	-	HT
D 09 61	FT. R. ALASKA	X	49.00	-	LT
D 09 61	FT. R. ALASKA	X	54.00	-	HT
D 10 61	FT. R. ALASKA	X	42.50	-	LT
D 10 61	FT. R. ALASKA	X	44.00	-	HT
D 11 61	FT. R. ALASKA	X	33.00	-	LT
D 11 61	FT. R. ALASKA	X	35.60	-	HT
D 12 61	FT. R. ALASKA	X	27.00	-	LT
D 12 61	FT. R. ALASKA	X	27.60	-	HT

TABLE 21. (Contd.)

D 01 62	FT. R.	ALASKA	N	22 X	25.77	SD	1.307	LT
D 01 62	FT. R.	ALASKA	N	22 X	28.14	SD	1.490	HT
D 02 62	FT. R.	ALASKA	N	19 X	26.37	SD	1.499	LT
D 02 62	FT. R.	ALASKA	N	19 X	28.58	SD	1.387	HT
D 03 62	FT. R.	ALASKA	N	22 X	27.73	SD	1.120	LT
D 03 62	FT. R.	ALASKA	N	22 X	30.32	SD	.477	HT
D 04 62	FT. R.	ALASKA	N	21 X	31.19	SD	.981	LT
D 04 62	FT. R.	ALASKA	N	21 X	33.38	SD	1.203	HT
D 05 62	FT. R.	ALASKA	N	22 X	34.95	SD	1.988	LT
D 05 62	FT. R.	ALASKA	N	22 X	37.45	SD	2.132	HT
D 06 62	FT. R.	ALASKA	N	21 X	44.95	SD	4.295	LT
D 06 62	FT. R.	ALASKA	N	21 X	48.24	SD	4.288	HT
D 07 62	FT. R.	ALASKA	N	21 X	53.67	SD	1.713	LT
D 07 62	FT. R.	ALASKA	N	21 X	56.76	SD	1.513	HT
D 08 62	FT. R.	ALASKA	N	23 X	55.26	SD	.864	LT
D 08 62	FT. R.	ALASKA	N	23 X	58.26	SD	.864	HT
D 09 62	FT. R.	ALASKA	N	19 X	47.16	SD	2.794	LT
D 09 62	FT. R.	ALASKA	N	19 X	52.26	SD	2.642	HT
D 10 62	FT. R.	ALASKA	N	23 X	42.13	SD	2.752	LT
D 10 62	FT. R.	ALASKA	N	23 X	44.91	SD	2.372	HT
D 11 62	FT. R.	ALASKA	N	19 X	32.95	SD	4.708	LT
D 11 62	FT. R.	ALASKA	N	19 X	35.84	SD	4.425	HT
D 12 62	FT. R.	ALASKA	N	18 X	27.06	SD	1.305	LT
D 12 62	FT. R.	ALASKA	N	18 X	29.56	SD	1.653	HT
D 01 63	FT. R.	ALASKA	N	22 X	26.00	SD	2.182	LT
D 01 63	FT. R.	ALASKA	N	22 X	28.55	SD	2.650	HT
D 02 63	FT. R.	ALASKA	N	19 X	25.63	SD	1.257	LT
D 02 63	FT. R.	ALASKA	N	19 X	28.58	SD	1.387	HT
D 03 63	FT. R.	ALASKA	N	21 X	28.52	SD	1.123	LT
D 03 63	FT. R.	ALASKA	N	21 X	31.62	SD	1.322	HT
D 04 63	FT. R.	ALASKA	N	22 X	29.95	SD	1.495	LT
D 04 63	FT. R.	ALASKA	N	22 X	32.59	SD	1.368	HT
D 05 63	FT. R.	ALASKA	N	21 X	35.76	SD	3.491	LT
D 05 63	FT. R.	ALASKA	N	21 X	38.29	SD	3.770	HT
D 06 63	FT. R.	ALASKA	N	20 X	44.10	SD	2.174	LT
D 06 63	FT. R.	ALASKA	N	20 X	47.60	SD	2.437	HT
D 07 63	FT. R.	ALASKA	N	21 X	51.95	SD	2.459	LT
D 07 63	FT. R.	ALASKA	N	21 X	55.81	SD	2.695	HT
D 08 63	FT. R.	ALASKA	N	22 X	52.55	SD	2.502	LT
D 08 63	FT. R.	ALASKA	N	22 X	56.36	SD	.790	HT
D 09 63	FT. R.	ALASKA	N	20 X	51.45	SD	1.432	LT
D 09 63	FT. R.	ALASKA	N	20 X	54.55	SD	1.669	HT
D 10 63	FT. R.	ALASKA	N	23 X	42.13	SD	4.556	LT
D 10 63	FT. R.	ALASKA	N	23 X	45.61	SD	4.304	HT
D 11 63	FT. R.	ALASKA	N	17 X	28.82	SD	4.733	LT
D 11 63	FT. R.	ALASKA	N	17 X	33.29	SD	3.869	HT
D 12 63	FT. R.	ALASKA	N	21 X	28.14	SD	1.526	LT
D 12 63	FT. R.	ALASKA	N	21 X	31.66	SD	1.769	HT

TABLE 21. (Contd.)

D 01 64	FT. R.	ALASKA	N	22	X	24.82	SD	1.651	LT
D 01 64	FT. R.	ALASKA	N	22	X	28.36	SD	1.891	HT
D 02 64	FT. R.	ALASKA	N	19	X	23.47	SD	.964	LT
D 02 64	FT. R.	ALASKA	N	19	X	27.63	SD	1.116	HT
D 03 64	FT. R.	ALASKA	N	22	X	25.36	SD	1.465	LT
D 03 64	FT. R.	ALASKA	N	22	X	28.73	SD	1.518	HT
D 04 64	FT. R.	ALASKA	N	22	X	29.09	SD	1.849	LT
D 04 64	FT. R.	ALASKA	N	22	X	32.77	SD	2.137	HT
D 05 64	FT. R.	ALASKA	N	20	X	33.15	SD	1.348	LT
D 05 64	FT. R.	ALASKA	N	20	X	36.80	SD	1.576	HT
D 06 64	FT. R.	ALASKA	N	21	X	43.67	SD	2.394	LT
D 06 64	FT. R.	ALASKA	N	21	X	46.24	SD	.889	HT
D 07 64	FT. R.	ALASKA	N	21	X	47.43	SD	1.630	LT
D 07 64	FT. R.	ALASKA	N	21	X	48.71	SD	1.554	HT
D 08 64	FT. R.	ALASKA	N	21	X	49.00	SD	.894	LT
D 08 64	FT. R.	ALASKA	N	21	X	50.29	SD	.463	HT
D 09 64	FT. R.	ALASKA	N	22	X	46.59	SD	.959	LT
D 09 64	FT. R.	ALASKA	N	22	X	49.73	SD	.456	HT
D 10 64	FT. R.	ALASKA	N	22	X	41.68	SD	2.885	LT
D 10 64	FT. R.	ALASKA	N	22	X	46.09	SD	3.100	HT
D 11 64	FT. R.	ALASKA	N	18	X	33.83	SD	1.855	LT
D 11 64	FT. R.	ALASKA	N	18	X	37.56	SD	1.977	HT
D 12 64	FT. R.	ALASKA	N	21	X	29.57	SD	1.989	LT
D 12 64	FT. R.	ALASKA	N	21	X	31.10	SD	2.343	HT
D 01 65	FT. R.	ALASKA	N	20	X	23.35	SD	2.207	LT
D 01 65	FT. R.	ALASKA	N	20	X	25.55	SD	1.849	HT
D 02 65	FT. R.	ALASKA	N	19	X	22.47	SD	1.020	LT
D 02 65	FT. R.	ALASKA	N	19	X	24.21	SD	.535	HT
D 03 65	FT. R.	ALASKA	N	23	X	27.30	SD	3.154	LT
D 03 65	FT. R.	ALASKA	N	23	X	29.09	SD	3.029	HT
D 04 65	FT. R.	ALASKA	N	22	X	31.95	SD	.653	LT
D 04 65	FT. R.	ALASKA	N	22	X	34.64	SD	1.399	HT
D 05 65	FT. R.	ALASKA	N	19	X	34.37	SD	2.499	LT
D 05 65	FT. R.	ALASKA	N	19	X	38.42	SD	2.341	HT
D 06 65	FT. R.	ALASKA	N	22	X	42.68	SD	2.056	LT
D 06 65	FT. R.	ALASKA	N	22	X	44.86	SD	.941	HT
D 07 65	FT. R.	ALASKA	N	20	X	47.50	SD	1.000	LT
D 07 65	FT. R.	ALASKA	N	20	X	48.55	SD	1.099	HT
D 08 65	FT. R.	ALASKA	N	27	X	48.15	SD	1.099	LT
D 08 65	FT. R.	ALASKA	N	27	X	49.89	SD	.847	HT
D 09 65	FT. R.	ALASKA	N	22	X	46.00	SD	1.155	LT
D 09 65	FT. R.	ALASKA	N	22	X	48.55	SD	.739	HT
D 10 65	FT. R.	ALASKA	N	21	X	38.29	SD	3.923	LT
D 10 65	FT. R.	ALASKA	N	21	X	40.48	SD	4.070	HT
D 11 65	FT. R.	ALASKA	N	20	X	30.00	SD	2.294	LT
D 11 65	FT. R.	ALASKA	N	20	X	32.85	SD	1.387	HT
D 12 65	FT. R.	ALASKA	N	21	X	26.33	SD	1.926	LT
D 12 65	FT. R.	ALASKA	N	21	X	28.67	SD	2.352	HT

TABLE 21. (Contd.)

D 01 66	FT. R.	ALASKA	N	21 X	21.95	SD	.921	LT
D 01 66	FT. R.	ALASKA	N	21 X	24.43	SD	.746	HT
D 02 66	FT. R.	ALASKA	N	19 X	23.58	SD	.692	LT
D 02 66	FT. R.	ALASKA	N	19 X	27.42	SD	2.009	HT
D 03 66	FT. R.	ALASKA	N	23 X	21.83	SD	2.902	LT
D 03 66	FT. R.	ALASKA	N	23 X	25.30	SD	2.439	HT
D 04 66	FT. R.	ALASKA	N	21 X	30.71	SD	1.271	LT
D 04 66	FT. R.	ALASKA	N	21 X	32.81	SD	1.289	HT
D 05 66	FT. R.	ALASKA	N	21 X	35.86	SD	2.128	LT
D 05 66	FT. R.	ALASKA	N	21 X	37.95	SD	1.987	HT
D 06 66	FT. R.	ALASKA	N	22 X	45.32	SD	2.868	LT
D 06 66	FT. R.	ALASKA	N	22 X	47.82	SD	3.290	HT
D 07 66	FT. R.	ALASKA	N	20 X	52.25	SD	2.468	LT
D 07 66	FT. R.	ALASKA	N	20 X	55.15	SD	2.134	HT
D 08 66	FT. R.	ALASKA	N	23 X	53.04	SD	1.331	LT
D 08 66	FT. R.	ALASKA	N	23 X	55.78	SD	1.380	HT
D 09 66	FT. R.	ALASKA	N	21 X	48.14	SD	1.982	LT
D 09 66	FT. R.	ALASKA	N	21 X	50.90	SD	2.022	HT
D 10 66	FT. R.	ALASKA	N	21 X	39.95	SD	4.330	LT
D 10 66	FT. R.	ALASKA	N	21 X	42.52	SD	4.143	HT
D 11 66	FT. R.	ALASKA	N	20 X	31.10	SD	1.971	LT
D 11 66	FT. R.	ALASKA	N	20 X	33.70	SD	1.809	HT
D 12 66	FT. R.	ALASKA	N	21 X	24.71	SD	2.305	LT
D 12 66	FT. R.	ALASKA	N	21 X	28.43	SD	2.293	HT
D 01 67	FT. R.	ALASKA	N	21 X	23.29	SD	2.004	LT
D 01 67	FT. R.	ALASKA	N	21 X	25.81	SD	1.537	HT
D 02 67	FT. R.	ALASKA	N	19 X	20.47	SD	.772	LT
D 02 67	FT. R.	ALASKA	N	19 X	24.95	SD	1.079	HT
D 03 67	FT. R.	ALASKA	N	23 X	23.48	SD	.898	LT
D 03 67	FT. R.	ALASKA	N	23 X	28.35	SD	.982	HT
D 04 67	FT. R.	ALASKA	N	20 X	27.60	SD	1.536	LT
D 04 67	FT. R.	ALASKA	N	20 X	29.05	SD	.686	HT
D 05 67	FT. R.	ALASKA	N	22 X	33.91	SD	3.146	LT
D 05 67	FT. R.	ALASKA	N	22 X	36.27	SD	3.667	HT
D 06 67	FT. R.	ALASKA	N	22 X	44.32	SD	4.258	LT
D 06 67	FT. R.	ALASKA	N	22 X	46.41	SD	4.067	HT
D 07 67	FT. R.	ALASKA	N	19 X	52.37	SD	2.166	LT
D 07 67	FT. R.	ALASKA	N	19 X	53.84	SD	1.573	HT

TABLE 22. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines, Monthly Summaries, Ft. Richardson, Alaska.

D 04 58	FT.	R.	ALASKA	X	40.00	-	LT
D 04 58	FT.	R.	ALASKA	X	46.00	-	HT
D 05 58	FT.	R.	ALASKA	X	47.00	-	LT
D 05 58	FT.	R.	ALASKA	X	57.00	-	HT
D 06 58	FT.	R.	ALASKA	X	59.00	-	LT
D 06 58	FT.	R.	ALASKA	X	65.00	-	HT
D 07 58	FT.	R.	ALASKA	X	60.00	-	LT
D 07 58	FT.	R.	ALASKA	X	64.00	-	HT
D 08 58	FT.	R.	ALASKA	X	55.00	-	LT
D 08 58	FT.	R.	ALASKA	X	62.00	-	HT
D 09 58	FT.	R.	ALASKA	X	49.00	-	LT
D 09 58	FT.	R.	ALASKA	X	53.00	-	HT
D 10 58	FT.	R.	ALASKA	X	31.00	-	LT
D 10 58	FT.	R.	ALASKA	X	35.00	-	HT
D 11 58	FT.	R.	ALASKA	X	22.00	-	LT
D 11 58	FT.	R.	ALASKA	X	25.00	-	HT
D 12 58	FT.	R.	ALASKA	X	18.00	-	LT
D 12 58	FT.	R.	ALASKA	X	20.00	-	HT
D 01 59	FT.	R.	ALASKA	X	10.00	-	LT
D 01 59	FT.	R.	ALASKA	X	13.00	-	HT
D 02 59	FT.	R.	ALASKA	X	21.00	-	LT
D 02 59	FT.	R.	ALASKA	X	24.00	-	HT
D 03 59	FT.	R.	ALASKA	X	20.00	-	LT
D 03 59	FT.	R.	ALASKA	X	26.00	-	HT
D 04 59	FT.	R.	ALASKA	X	35.00	-	LT
D 04 59	FT.	R.	ALASKA	X	40.00	-	HT
D 05 59	FT.	R.	ALASKA	X	50.00	-	LT
D 05 59	FT.	R.	ALASKA	X	56.00	-	HT
D 06 59	FT.	R.	ALASKA	X	62.00	-	LT
D 06 59	FT.	R.	ALASKA	X	70.00	-	HT
D 07 59	FT.	R.	ALASKA	X	60.00	-	LT
D 07 59	FT.	R.	ALASKA	X	64.00	-	HT
D 08 59	FT.	R.	ALASKA	X	61.00	-	LT
D 08 59	FT.	R.	ALASKA	X	63.00	-	HT
D 09 59	FT.	R.	ALASKA	X	50.00	-	LT
D 09 59	FT.	R.	ALASKA	X	54.00	-	HT
D 10 59	FT.	R.	ALASKA	X	32.00	-	LT
D 10 59	FT.	R.	ALASKA	X	37.00	-	HT
D 11 59	FT.	R.	ALASKA	X	23.00	-	LT
D 11 59	FT.	R.	ALASKA	X	29.00	-	HT
D 12 59	FT.	R.	ALASKA	X	20.00	-	LT
D 12 59	FT.	R.	ALASKA	X	24.00	-	HT

TABLE 22. (Contd.)

D 01 60	FT.	R.	ALASKA	X	18.00	-	LT
D 01 60	FT.	R.	ALASKA	X	23.00	-	HT
D 02 60	FT.	R.	ALASKA	X	22.00	-	LT
D 02 60	FT.	R.	ALASKA	X	27.00	-	HT
D 03 60	FT.	R.	ALASKA	X	23.00	-	LT
D 03 60	FT.	R.	ALASKA	X	31.00	-	HT
D 04 60	FT.	R.	ALASKA	X	24.00	-	LT
D 04 60	FT.	R.	ALASKA	X	40.00	-	HT
D 05 60	FT.	R.	ALASKA	X	40.00	-	LT
D 05 60	FT.	R.	ALASKA	X	58.00	-	HT
D 06 60	FT.	R.	ALASKA	X	59.00	-	LT
D 06 60	FT.	R.	ALASKA	X	62.00	-	HT
D 07 60	FT.	R.	ALASKA	X	61.00	-	LT
D 07 60	FT.	R.	ALASKA	X	68.00	-	HT
D 08 60	FT.	R.	ALASKA	X	56.00	-	LT
D 08 60	FT.	R.	ALASKA	X	65.00	-	HT
D 09 60	FT.	R.	ALASKA	X	47.00	-	LT
D 09 60	FT.	R.	ALASKA	X	54.00	-	HT
D 10 60	FT.	R.	ALASKA	X	35.00	-	LT
D 10 60	FT.	R.	ALASKA	X	40.00	-	HT
D 11 60	FT.	R.	ALASKA	X	23.00	-	LT
D 11 60	FT.	R.	ALASKA	X	30.00	-	HT
D 12 60	FT.	R.	ALASKA	X	23.00	-	LT
D 12 60	FT.	R.	ALASKA	X	25.00	-	HT
D 01 61	FT.	R.	ALASKA	X	14.00	-	LT
D 01 61	FT.	R.	ALASKA	X	23.00	-	HT
D 02 61	FT.	R.	ALASKA	X	17.00	-	LT
D 02 61	FT.	R.	ALASKA	X	24.00	-	HT
D 03 61	FT.	R.	ALASKA	X	27.00	-	LT
D 03 61	FT.	R.	ALASKA	X	36.00	-	HT
D 04 61	FT.	R.	ALASKA	X	35.00	-	LT
D 04 61	FT.	R.	ALASKA	X	39.00	-	HT
D 05 61	FT.	R.	ALASKA	X	47.00	-	LT
D 05 61	FT.	R.	ALASKA	X	57.00	-	HT
D 06 61	FT.	R.	ALASKA	X	54.00	-	LT
D 06 61	FT.	R.	ALASKA	X	65.00	-	HT
D 07 61	FT.	R.	ALASKA	X	35.00	-	LT
D 07 61	FT.	R.	ALASKA	X	67.00	-	HT
D 08 61	FT.	R.	ALASKA	X	53.00	-	LT
D 08 61	FT.	R.	ALASKA	X	63.00	-	HT
D 09 61	FT.	R.	ALASKA	X	49.00	-	LT
D 09 61	FT.	R.	ALASKA	X	55.00	-	HT
D 10 61	FT.	R.	ALASKA	X	38.00	-	LT
D 10 61	FT.	R.	ALASKA	X	44.00	-	HT
D 11 61	FT.	R.	ALASKA	X	23.00	-	LT
D 11 61	FT.	R.	ALASKA	X	30.00	-	HT
D 12 61	FT.	R.	ALASKA	X	15.00	-	LT
D 12 61	FT.	R.	ALASKA	X	21.00	-	HT

TABLE 22. (Contd.)

D 01 62	FT. R.	ALASKA	N	22	X	10.59	SD	4.239	LT
D 01 62	FT. R.	ALASKA	N	22	X	19.63	SL	4.998	HT
D 02 62	FT. R.	ALASKA	N	19	X	18.05	SD	6.160	LT
D 02 62	FT. R.	ALASKA	N	19	X	24.53	SD	5.211	HT
D 03 62	FT. R.	ALASKA	N	22	X	21.05	SL	4.884	LT
D 03 62	FT. R.	ALASKA	N	22	X	29.41	SD	4.479	HT
D 04 62	FT. R.	ALASKA	N	21	X	36.05	SD	6.771	LT
D 04 62	FT. R.	ALASKA	N	21	X	45.48	SD	5.653	HT
D 05 62	FT. R.	ALASKA	N	22	X	46.50	SD	3.839	LT
D 05 62	FT. R.	ALASKA	N	22	X	55.68	SD	3.257	HT
D 06 62	FT. R.	ALASKA	N	21	X	55.71	SD	4.562	LT
D 06 62	FT. R.	ALASKA	N	21	X	64.95	SD	6.168	HT
D 07 62	FT. R.	ALASKA	N	21	X	63.24	SD	5.147	LT
D 07 62	FT. R.	ALASKA	N	21	X	72.52	SD	4.262	HT
D 08 62	FT. R.	ALASKA	N	23	X	60.22	SL	3.074	LT
D 08 62	FT. R.	ALASKA	N	23	X	68.00	SD	3.826	HT
D 09 62	FT. R.	ALASKA	N	19	X	46.63	SD	3.483	LT
D 09 62	FT. R.	ALASKA	N	19	X	55.63	SD	4.717	HT
D 10 62	FT. R.	ALASKA	N	23	X	38.65	SD	3.857	LT
D 10 62	FT. R.	ALASKA	N	23	X	44.48	SD	5.035	HT
D 11 62	FT. R.	ALASKA	N	19	X	22.42	SD	9.167	LT
D 11 62	FT. R.	ALASKA	N	19	X	30.58	SD	9.771	HT
D 12 62	FT. R.	ALASKA	N	16	X	15.72	SD	11.198	LT
D 12 62	FT. R.	ALASKA	N	16	X	21.78	SD	10.597	HT
D 01 63	FT. R.	ALASKA	N	20	X	16.75	SD	12.464	LT
D 01 63	FT. R.	ALASKA	N	20	X	23.45	SD	10.410	HT
D 02 63	FT. R.	ALASKA	N	19	X	20.47	SD	6.141	LT
D 02 63	FT. R.	ALASKA	N	19	X	25.24	SD	6.492	HT
D 03 63	FT. R.	ALASKA	N	21	X	24.62	SD	4.295	LT
D 03 63	FT. R.	ALASKA	N	21	X	32.48	SD	4.833	HT
D 04 63	FT. R.	ALASKA	N	22	X	30.82	SD	6.261	LT
D 04 63	FT. R.	ALASKA	N	22	X	39.50	SD	5.861	HT
D 05 63	FT. R.	ALASKA	N	21	X	49.66	SD	5.668	LT
D 05 63	FT. R.	ALASKA	N	21	X	58.90	SD	6.511	HT
D 06 63	FT. R.	ALASKA	N	20	X	55.25	SD	3.432	LT
D 06 63	FT. R.	ALASKA	N	20	X	64.15	SD	3.200	HT
D 07 63	FT. R.	ALASKA	N	21	X	61.95	SD	4.248	LT
D 07 63	FT. R.	ALASKA	N	21	X	69.52	SD	5.715	HT
D 08 63	FT. R.	ALASKA	N	22	X	59.45	SD	3.851	LT
D 08 63	FT. R.	ALASKA	N	22	X	67.36	SD	4.304	HT
D 09 63	FT. R.	ALASKA	N	20	X	53.35	SD	4.120	LT
D 09 63	FT. R.	ALASKA	N	20	X	61.40	SD	4.661	HT
D 10 63	FT. R.	ALASKA	N	23	X	37.57	SD	6.693	LT
D 10 63	FT. R.	ALASKA	N	23	X	44.00	SD	6.882	HT
D 11 63	FT. R.	ALASKA	N	16	X	17.56	SD	8.922	LT
D 11 63	FT. R.	ALASKA	N	16	X	23.12	SD	7.974	HT
D 12 63	FT. R.	ALASKA	N	21	X	21.05	SD	7.025	LT
D 12 63	FT. R.	ALASKA	N	21	X	27.71	SL	4.724	HT

TABLE 22. (Contd.)

D 01 64	FT. R.	ALASKA	N	22 X	14.14	SD	5.439	LT
D 01 64	FT. R.	ALASKA	N	22 X	19.14	SD	4.549	HT
D 02 64	FT. R.	ALASKA	N	19 X	17.74	SD	8.096	LT
D 02 64	FT. R.	ALASKA	N	19 X	25.84	SD	7.755	HT
D 03 64	FT. R.	ALASKA	N	20 X	20.60	SD	4.453	LT
D 03 64	FT. R.	ALASKA	N	20 X	28.75	SD	4.315	HT
D 04 64	FT. R.	ALASKA	N	22 X	32.77	SD	5.571	LT
D 04 64	FT. R.	ALASKA	N	22 X	42.59	SD	3.912	HT
D 05 64	FT. R.	ALASKA	N	20 X	43.60	SD	4.057	LT
D 05 64	FT. R.	ALASKA	N	20 X	52.85	SD	2.700	HT
D 06 64	FT. R.	ALASKA	N	21 X	60.24	SD	4.158	LT
D 06 64	FT. R.	ALASKA	N	21 X	70.05	SD	3.485	HT
D 07 64	FT. R.	ALASKA	N	21 X	60.81	SD	4.986	LT
D 07 64	FT. R.	ALASKA	N	21 X	71.38	SD	3.369	HT
D 08 64	FT. R.	ALASKA	N	21 X	55.86	SD	3.928	LT
D 08 64	FT. R.	ALASKA	N	21 X	65.52	SD	4.389	HT
D 09 64	FT. R.	ALASKA	N	22 X	52.55	SD	3.700	LT
D 09 64	FT. R.	ALASKA	N	22 X	59.64	SD	5.314	HT
D 10 64	FT. R.	ALASKA	N	22 X	38.59	SD	7.196	LT
D 10 64	FT. R.	ALASKA	N	22 X	44.73	SD	6.874	HT
D 11 64	FT. R.	ALASKA	N	18 X	25.39	SD	4.877	LT
D 11 64	FT. R.	ALASKA	N	18 X	30.56	SD	2.791	HT
D 12 64	FT. R.	ALASKA	N	21 X	8.24	SD	6.870	LT
D 12 64	FT. R.	ALASKA	N	21 X	13.14	SD	6.295	HT
D 01 65	FT. R.	ALASKA	N	18 X	12.94	SD	7.989	LT
D 01 65	FT. R.	ALASKA	N	18 X	17.06	SD	8.592	HT
D 02 65	FT. R.	ALASKA	N	19 X	15.05	SD	4.007	LT
D 02 65	FT. R.	ALASKA	N	19 X	19.84	SD	4.438	HT
D 03 65	FT. R.	ALASKA	N	23 X	31.39	SD	6.597	LT
D 03 65	FT. R.	ALASKA	N	23 X	34.87	SD	6.002	HT
D 04 65	FT. R.	ALASKA	N	22 X	39.82	SD	4.294	LT
D 04 65	FT. R.	ALASKA	N	22 X	45.86	SD	4.411	HT
D 05 65	FT. R.	ALASKA	N	19 X	45.11	SD	5.685	LT
D 05 65	FT. R.	ALASKA	N	19 X	51.84	SD	5.993	HT
D 06 65	FT. R.	ALASKA	N	22 X	52.23	SD	4.985	LT
D 06 65	FT. R.	ALASKA	N	22 X	59.27	SD	2.334	HT
D 07 65	FT. R.	ALASKA	N	20 X	60.25	SD	3.041	LT
D 07 65	FT. R.	ALASKA	N	20 X	65.70	SD	3.600	HT
D 08 65	FT. R.	ALASKA	N	37 X	57.92	SD	2.671	LT
D 08 65	FT. R.	ALASKA	N	37 X	63.73	SD	4.005	HT
D 09 65	FT. R.	ALASKA	N	22 X	52.73	SD	5.193	LT
D 09 65	FT. R.	ALASKA	N	22 X	57.09	SD	5.639	HT
D 10 65	FT. R.	ALASKA	N	9 X	29.00	SD	3.606	LT
D 10 65	FT. R.	ALASKA	N	9 X	33.22	SD	1.986	HT
D 11 65	FT. R.	ALASKA	N	20 X	21.05	SD	5.385	LT
D 11 65	FT. R.	ALASKA	N	20 X	26.65	SD	5.314	HT
D 12 65	FT. R.	ALASKA	N	21 X	15.05	SD	6.225	LT
D 12 65	FT. R.	ALASKA	N	21 X	18.19	SD	7.711	HT

TABLE 22. (Contd.)

D 01 66	FT. R.	ALASKA	N	21 X	10.24	SD	5.567	LT
D 01 66	FT. R.	ALASKA	N	21 X	12.66	SD	6.303	HT
D 02 66	FT. R.	ALASKA	N	19 X	17.74	SD	4.039	LT
D 02 66	FT. R.	ALASKA	N	19 X	24.05	SD	3.325	HT
L 03 66	FT. R.	ALASKA	N	23 X	21.22	SD	7.317	LT
L 03 66	FT. R.	ALASKA	N	23 X	27.70	SD	5.912	HT
D 04 66	FT. R.	ALASKA	N	21 X	37.67	SD	3.246	LT
D 04 66	FT. R.	ALASKA	N	21 X	44.57	SD	3.682	HT
D 05 66	FT. R.	ALASKA	N	21 X	47.62	SD	1.802	LT
D 05 66	FT. R.	ALASKA	N	21 X	53.66	SD	2.886	HT
L 06 66	FT. R.	ALASKA	N	22 X	60.36	SD	3.922	LT
D 06 66	FT. R.	ALASKA	N	22 X	67.95	SD	4.582	HT
D 07 66	FT. R.	ALASKA	N	20 X	63.65	SD	3.815	LT
D 07 66	FT. R.	ALASKA	N	20 X	70.10	SD	6.173	HT
D 08 66	FT. R.	ALASKA	N	23 X	57.43	SD	4.756	LT
D 08 66	FT. R.	ALASKA	N	23 X	63.22	SD	4.786	HT
D 09 66	FT. R.	ALASKA	N	21 X	49.86	SD	3.071	LT
D 09 66	FT. R.	ALASKA	N	21 X	56.29	SD	4.617	HT
L 10 66	FT. R.	ALASKA	N	21 X	35.10	SD	9.208	LT
D 10 66	FT. R.	ALASKA	N	21 X	39.52	SD	8.953	HT
D 11 66	FT. R.	ALASKA	N	20 X	22.55	SD	5.196	LT
D 11 66	FT. R.	ALASKA	N	20 X	26.10	SD	5.281	HT
D 12 66	FT. R.	ALASKA	N	21 X	9.76	SD	5.108	LT
D 12 66	FT. R.	ALASKA	N	21 X	17.62	SD	4.165	HT
D 01 67	FT. R.	ALASKA	N	21 X	13.38	SD	3.248	LT
D 01 67	FT. R.	ALASKA	N	21 X	17.05	SD	2.974	HT
D 02 67	FT. R.	ALASKA	N	19 X	14.58	SD	4.948	LT
D 02 67	FT. R.	ALASKA	N	19 X	22.16	SD	5.113	HT
L 03 67	FT. R.	ALASKA	N	23 X	27.70	SD	2.566	LT
D 03 67	FT. R.	ALASKA	N	23 X	34.48	SD	3.489	HT
L 04 67	FT. R.	ALASKA	N	20 X	38.85	SD	3.031	LT
D 04 67	FT. R.	ALASKA	N	20 X	45.25	SD	3.726	HT
D 05 67	FT. R.	ALASKA	N	22 X	49.05	SD	7.188	LT
D 05 67	FT. R.	ALASKA	N	22 X	59.77	SD	4.898	HT
L 06 67	FT. R.	ALASKA	N	22 X	59.91	SD	3.250	LT
L 06 67	FT. R.	ALASKA	N	22 X	64.23	SD	4.908	HT
D 07 67	FT. R.	ALASKA	N	19 X	62.47	SD	4.414	LT
D 07 67	FT. R.	ALASKA	N	19 X	69.95	SD	5.492	HT

TABLE 23. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines,
Monthly Summaries, NS, Kodiak, Alaska.

D	01	67	N.S.	KODIAK	N	27	X	30.04	SD	4.229	LT
L	01	67	N.S.	KODIAK	N	27	X	33.67	SD	3.772	HT
D	02	67	N.S.	KODIAK	N	27	X	29.67	SD	4.270	LT
D	02	67	N.S.	KODIAK	N	27	X	33.48	SD	2.293	HT
D	03	67	N.S.	KODIAK	N	34	X	32.32	SD	2.671	LT
D	03	67	N.S.	KODIAK	N	34	X	34.62	SD	2.229	HT
L	04	67	N.S.	KODIAK	N	33	X	34.76	SD	2.926	LT
L	04	67	N.S.	KODIAK	N	33	X	38.61	SD	4.723	HT
L	05	67	N.S.	KODIAK	H	45	X	41.09	SD	3.741	LT
L	05	67	N.S.	KODIAK	N	45	X	45.13	SD	4.630	HT
D	06	67	N.S.	KODIAK	N	30	X	46.70	SD	2.120	LT
D	06	67	N.S.	KODIAK	N	30	X	50.70	SD	3.949	HT
D	07	67	N.S.	KODIAK	N	37	X	51.22	SD	8.274	LT
D	07	67	N.S.	KODIAK	N	37	X	60.41	SD	6.457	HT
L	08	67	N.S.	KODIAK	N	32	X	53.59	SD	1.739	LT
L	08	67	N.S.	KODIAK	N	32	X	58.16	SD	4.205	HT

TABLE 24. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines,
Monthly Summaries, NS, Kodiak, Alaska.

0 07 60	N.S.	KODIAK	N	5 X	47.40	SD	5.983	LT
0 07 66	N.S.	KODIAK	N	5 X	69.80	SD	7.014	HT
0 08 60	N.S.	KODIAK	N	23 X	52.00	SD	4.945	LT
0 09 60	N.S.	KODIAK	N	23 X	70.35	SD	2.886	HT
0 09 60	N.S.	KODIAK	N	21 X	48.61	SD	4.285	LT
0 10 60	N.S.	KODIAK	N	21 X	65.38	SD	4.727	HT
0 10 60	N.S.	KODIAK	N	21 X	36.05	SD	9.086	LT
0 11 60	N.S.	KODIAK	N	20 X	57.67	SD	8.422	HT
0 11 60	N.S.	KODIAK	N	20 X	29.65	SD	3.498	LT
0 12 60	N.S.	KODIAK	N	20 X	42.60	SD	7.214	HT
0 12 66	N.S.	KODIAK	N	21 X	26.19	SD	4.792	LT
0 01 67	N.S.	KODIAK	N	21 X	35.57	SD	4.760	HT
0 01 67	N.S.	KODIAK	N	49 X	24.96	SD	3.867	LT
0 02 67	N.S.	KODIAK	N	49 X	32.59	SD	4.546	HT
0 02 67	N.S.	KODIAK	N	50 X	22.84	SD	4.137	LT
0 03 67	N.S.	KODIAK	N	50 X	33.04	SD	4.086	HT
0 03 67	N.S.	KODIAK	N	63 X	29.10	SD	4.336	LT
0 04 67	N.S.	KODIAK	N	63 X	40.76	SD	4.888	HT
0 04 67	N.S.	KODIAK	N	61 X	35.64	SD	4.820	LT
0 05 67	N.S.	KODIAK	N	61 X	46.05	SD	4.738	HT
0 05 67	N.S.	KODIAK	N	72 X	42.43	SD	4.849	LT
0 06 67	N.S.	KODIAK	N	72 X	55.26	SD	6.400	HT
0 06 67	N.S.	KODIAK	N	64 X	48.72	SD	3.543	LT
0 07 67	N.S.	KODIAK	N	64 X	59.59	SD	3.477	HT
0 07 67	N.S.	KODIAK	N	62 X	55.52	SD	7.873	LT
0 08 67	N.S.	KODIAK	N	62 X	71.15	SD	6.135	HT
0 08 67	N.S.	KODIAK	N	53 X	53.68	SD	4.510	LT
0 08 67	N.S.	KODIAK	N	53 X	65.28	SD	5.500	HT

GRAPHIC NOT REPRODUCIBLE

TABLE 25. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines,
Monthly Summaries, NS, Adak, Alaska.

D 01 59	ADAK, ALASKA	N	56 X	32.00	SD	3.208	LT
D 01 59	ADAK, ALASKA	N	56 X	37.27	SD	3.451	HT
D 02 59	ADAK, ALASKA	N	60 X	31.92	SD	2.445	LT
D 02 59	ADAK, ALASKA	N	60 X	36.87	SD	3.591	HT
D 03 59	ADAK, ALASKA	N	71 X	31.48	SD	2.698	LT
D 03 59	ADAK, ALASKA	N	71 X	37.17	SD	3.902	HT
D 04 59	ADAK, ALASKA	N	65 X	34.17	SD	4.211	LT
D 04 59	ADAK, ALASKA	N	65 X	42.95	SD	6.355	HT
D 05 59	ADAK, ALASKA	N	60 X	36.63	SD	1.983	LT
D 05 59	ADAK, ALASKA	N	60 X	43.23	SD	4.474	HT
D 06 59	ADAK, ALASKA	N	65 X	40.86	SD	2.633	LT
D 06 59	ADAK, ALASKA	N	65 X	47.71	SD	5.795	HT
D 07 59	ADAK, ALASKA	N	69 X	43.93	SD	1.801	LT
D 07 59	ADAK, ALASKA	N	69 X	51.26	SD	6.046	HT
D 08 59	ADAK, ALASKA	N	58 X	47.90	SD	3.116	LT
D 08 59	ADAK, ALASKA	N	58 X	54.62	SD	5.207	HT
D 09 59	ADAK, ALASKA	N	54 X	47.28	SD	2.261	LT
D 09 59	ADAK, ALASKA	N	54 X	55.48	SD	5.535	HT
D 10 59	ADAK, ALASKA	N	52 X	42.77	SD	2.414	LT
D 10 59	ADAK, ALASKA	N	52 X	47.87	SD	3.831	HT
D 11 59	ADAK, ALASKA	N	50 X	36.86	SD	2.070	LT
D 11 59	ADAK, ALASKA	N	50 X	43.10	SD	4.176	HT
D 12 59	ADAK, ALASKA	N	57 X	31.53	SD	2.989	LT
D 12 59	ADAK, ALASKA	N	57 X	38.04	SD	3.708	HT
L 01 60	ADAK, ALASKA	N	50 X	31.36	SD	2.380	LT
D 01 60	ADAK, ALASKA	N	50 X	37.42	SD	4.380	HT
D 02 60	ADAK, ALASKA	N	49 X	30.89	SD	3.341	LT
D 02 60	ADAK, ALASKA	N	49 X	38.29	SD	5.443	HT
D 03 60	ADAK, ALASKA	N	57 X	32.32	SD	2.131	LT
D 03 60	ADAK, ALASKA	N	57 X	38.16	SD	4.292	HT
D 04 60	ADAK, ALASKA	N	48 X	32.52	SD	1.337	LT
D 04 60	ADAK, ALASKA	N	48 X	39.56	SD	5.239	HT
D 05 60	ADAK, ALASKA	N	47 X	35.11	SD	2.407	LT
D 05 60	ADAK, ALASKA	N	47 X	42.26	SD	5.215	HT
D 06 60	ADAK, ALASKA	N	53 X	39.77	SD	2.819	LT
D 06 60	ADAK, ALASKA	N	53 X	44.42	SD	3.433	HT
D 07 60	ADAK, ALASKA	N	44 X	44.62	SD	2.855	LT
D 07 60	ADAK, ALASKA	N	44 X	51.09	SD	6.209	HT
D 08 60	ADAK, ALASKA	N	51 X	46.17	SD	2.409	LT
D 08 60	ADAK, ALASKA	N	51 X	52.31	SD	4.615	HT
D 09 60	ADAK, ALASKA	N	47 X	45.62	SD	1.596	LT
D 09 60	ADAK, ALASKA	N	47 X	51.66	SD	3.830	HT
D 10 60	ADAK, ALASKA	N	45 X	41.91	SD	3.110	LT
D 10 60	ADAK, ALASKA	N	45 X	49.00	SD	3.849	HT
D 11 60	ADAK, ALASKA	N	50 X	34.66	SD	2.876	LT
D 11 60	ADAK, ALASKA	N	50 X	42.82	SD	4.672	HT
D 12 60	ADAK, ALASKA	N	48 X	32.44	SD	1.855	LT
D 12 60	ADAK, ALASKA	N	48 X	37.90	SD	3.651	HT

TABLE 25. (Contd.)

D 01 01	ADAK, ALASKA	N	32 X	31.56	SD	1.900	LT
D 01 01	ADAK, ALASKA	N	32 X	35.66	SD	3.651	HT
D 02 01	ADAK, ALASKA	N	39 X	30.36	SD	3.039	LT
D 02 01	ADAK, ALASKA	N	39 X	36.92	SD	4.625	HT
D 03 01	ADAK, ALASKA	N	25 X	30.28	SD	2.606	LT
D 03 01	ADAK, ALASKA	N	25 X	38.16	SD	6.530	HT
D 04 01	ADAK, ALASKA	N	40 X	33.32	SD	2.515	LT
D 04 01	ADAK, ALASKA	N	40 X	39.17	SD	5.737	HT
D 05 01	ADAK, ALASKA	N	48 X	36.56	SD	2.010	LT
D 05 01	ADAK, ALASKA	N	48 X	41.79	SD	3.543	HT
D 06 01	ADAK, ALASKA	N	48 X	41.02	SD	2.188	LT
D 06 01	ADAK, ALASKA	N	48 X	46.15	SD	4.366	HT
D 07 01	ADAK, ALASKA	N	42 X	44.43	SD	1.627	LT
D 07 01	ADAK, ALASKA	N	42 X	50.12	SD	5.807	HT
D 08 01	ADAK, ALASKA	N	53 X	45.74	SD	2.211	LT
D 08 01	ADAK, ALASKA	N	53 X	52.68	SD	5.902	HT
D 09 01	ADAK, ALASKA	N	45 X	45.36	SD	1.873	LT
D 09 01	ADAK, ALASKA	N	45 X	50.20	SD	4.650	HT
D 10 01	ADAK, ALASKA	N	49 X	41.65	SD	3.244	LT
D 10 01	ADAK, ALASKA	N	49 X	47.80	SD	4.950	HT
D 11 01	ADAK, ALASKA	N	52 X	34.75	SD	4.657	LT
D 11 01	ADAK, ALASKA	N	52 X	45.44	SD	4.680	HT
D 12 01	ADAK, ALASKA	N	47 X	31.85	SD	3.923	LT
D 12 01	ADAK, ALASKA	N	47 X	41.62	SD	5.383	HT
D 01 02	ADAK, ALASKA	N	50 X	29.63	SD	4.097	LT
D 01 02	ADAK, ALASKA	N	52 X	38.69	SD	5.747	HT
D 02 02	ADAK, ALASKA	N	45 X	30.24	SD	4.375	LT
D 02 02	ADAK, ALASKA	N	45 X	38.67	SD	5.901	HT
D 03 02	ADAK, ALASKA	N	45 X	30.19	SD	6.061	LT
D 03 02	ADAK, ALASKA	N	48 X	43.66	SD	7.135	HT
D 04 02	ADAK, ALASKA	N	48 X	32.29	SD	6.885	LT
D 04 02	ADAK, ALASKA	N	48 X	45.37	SD	7.824	HT
D 05 02	ADAK, ALASKA	N	53 X	35.30	SD	6.835	LT
D 05 02	ADAK, ALASKA	N	53 X	48.40	SD	6.910	HT
D 06 02	ADAK, ALASKA	N	47 X	39.51	SD	7.107	LT
D 06 02	ADAK, ALASKA	N	47 X	53.69	SD	7.877	HT
D 07 02	ADAK, ALASKA	N	46 X	46.72	SD	6.069	LT
D 07 02	ADAK, ALASKA	N	48 X	56.02	SD	8.040	HT
D 08 02	ADAK, ALASKA	N	56 X	48.70	SD	3.658	LT
D 08 02	ADAK, ALASKA	N	56 X	57.39	SD	6.711	HT
D 09 02	ADAK, ALASKA	N	47 X	43.45	SD	4.938	LT
D 09 02	ADAK, ALASKA	N	47 X	57.28	SD	6.899	HT
D 10 02	ADAK, ALASKA	N	50 X	39.99	SD	4.579	LT
D 10 02	ADAK, ALASKA	N	56 X	53.13	SD	7.432	HT
D 11 02	ADAK, ALASKA	N	48 X	34.87	SD	5.652	LT
D 11 02	ADAK, ALASKA	N	49 X	44.19	SD	3.391	HT
D 12 02	ADAK, ALASKA	N	49 X	32.82	SD	5.267	LT
D 12 02	ADAK, ALASKA	N	49 X	43.72	SD	6.433	HT

TABLE 25. (Contd.)

D 01 63	ADAK, ALASKA	N	56 X	32.11	SD	3.850	LT
D 01 63	ADAK, ALASKA	N	58 X	41.41	SD	5.768	HT
D 02 63	ADAK, ALASKA	N	48 X	30.67	SD	5.548	LT
D 02 63	ADAK, ALASKA	N	48 X	42.10	SD	7.241	HT
D 03 63	ADAK, ALASKA	N	49 X	32.29	SD	5.184	LT
D 03 63	ADAK, ALASKA	N	49 X	45.00	SD	7.042	HT
D 04 63	ADAK, ALASKA	N	52 X	36.17	SD	3.377	LT
D 04 63	ADAK, ALASKA	N	52 X	44.60	SD	4.979	HT
D 05 63	ADAK, ALASKA	N	56 X	36.66	SD	4.795	LT
D 05 63	ADAK, ALASKA	N	56 X	46.04	SD	3.683	HT
D 06 63	ADAK, ALASKA	N	46 X	38.46	SD	3.059	LT
D 06 63	ADAK, ALASKA	N	46 X	47.33	SD	2.382	HT
D 07 63	ADAK, ALASKA	N	53 X	44.92	SD	3.689	LT
D 07 63	ADAK, ALASKA	N	53 X	54.66	SD	5.629	HT
D 08 63	ADAK, ALASKA	N	52 X	45.85	SD	4.548	LT
D 08 63	ADAK, ALASKA	N	52 X	56.44	SD	4.956	HT
D 09 63	ADAK, ALASKA	N	49 X	44.35	SD	4.131	LT
D 09 63	ADAK, ALASKA	N	49 X	55.14	SD	5.741	HT
D 10 63	ADAK, ALASKA	N	56 X	41.68	SD	4.907	LT
D 10 63	ADAK, ALASKA	N	56 X	55.77	SD	6.891	HT
D 11 63	ADAK, ALASKA	N	37 X	38.30	SD	4.415	LT
D 11 63	ADAK, ALASKA	N	37 X	49.32	SD	7.491	HT
D 12 63	ADAK, ALASKA	N	39 X	32.92	SD	4.439	LT
D 12 63	ADAK, ALASKA	N	39 X	45.15	SD	9.727	HT
D 01 64	ADAK, ALASKA	N	34 X	29.60	SD	5.343	LT
D 01 64	ADAK, ALASKA	N	34 X	43.65	SD	7.377	HT
D 04 64	ADAK, ALASKA	N	19 X	31.68	SD	3.092	LT
D 04 64	ADAK, ALASKA	N	19 X	42.37	SD	7.448	HT
D 05 64	ADAK, ALASKA	N	28 X	31.96	SD	6.304	LT
D 05 64	ADAK, ALASKA	N	28 X	45.39	SD	8.535	HT
D 06 64	ADAK, ALASKA	N	26 X	33.00	SD	7.244	LT
D 06 64	ADAK, ALASKA	N	26 X	49.88	SD	8.111	HT
D 07 64	ADAK, ALASKA	N	33 X	38.12	SD	7.889	LT
D 07 64	ADAK, ALASKA	N	33 X	60.18	SD	12.558	HT
D 08 64	ADAK, ALASKA	N	35 X	39.57	SD	7.200	LT
D 08 64	ADAK, ALASKA	N	35 X	55.66	SD	11.183	HT
D 09 64	ADAK, ALASKA	N	37 X	41.00	SD	5.492	LT
D 09 64	ADAK, ALASKA	N	37 X	52.51	SD	8.181	HT
D 10 64	ADAK, ALASKA	N	50 X	36.08	SD	6.989	LT
D 10 64	ADAK, ALASKA	N	50 X	49.80	SD	8.089	HT
D 11 64	ADAK, ALASKA	N	36 X	31.67	SD	7.664	LT
D 11 64	ADAK, ALASKA	N	36 X	44.17	SD	7.280	HT
D 12 64	ADAK, ALASKA	N	40 X	30.37	SD	6.968	LT
D 12 64	ADAK, ALASKA	N	40 X	42.45	SD	8.354	HT

TABLE 25. (Contd.)

D 01 65	ADAK, ALASKA	N	52 X	29.46	SD	6.758	LT
D 01 65	ADAK, ALASKA	N	52 X	39.12	SD	7.980	HT
D 02 65	ADAK, ALASKA	N	35 X	28.86	SD	5.621	LT
D 02 65	ADAK, ALASKA	N	35 X	38.71	SD	7.572	HT
D 03 65	ADAK, ALASKA	N	28 X	28.36	SD	5.768	LT
D 03 65	ADAK, ALASKA	N	28 X	42.25	SD	9.220	HT
D 04 65	ADAK, ALASKA	N	50 X	30.52	SD	7.080	LT
D 04 65	ADAK, ALASKA	N	50 X	44.36	SD	7.724	HT
D 05 65	ADAK, ALASKA	N	40 X	32.15	SD	6.538	LT
D 05 65	ADAK, ALASKA	N	40 X	46.65	SD	8.100	HT
D 06 65	ADAK, ALASKA	N	44 X	35.34	SD	6.520	LT
D 06 65	ADAK, ALASKA	N	44 X	47.48	SD	7.457	HT
D 07 65	ADAK, ALASKA	N	38 X	40.97	SD	6.078	LT
D 07 65	ADAK, ALASKA	N	38 X	51.97	SD	7.971	HT
D 08 65	ADAK, ALASKA	N	44 X	44.41	SD	5.258	LT
D 08 65	ADAK, ALASKA	N	44 X	53.34	SD	6.591	HT
D 09 65	ADAK, ALASKA	N	37 X	44.73	SD	3.326	LT
D 09 65	ADAK, ALASKA	N	37 X	50.24	SD	4.873	HT
D 10 65	ADAK, ALASKA	N	33 X	40.94	SD	2.561	LT
D 10 65	ADAK, ALASKA	N	33 X	45.18	SD	4.341	HT
D 11 65	ADAK, ALASKA	N	122 X	39.73	SD	2.533	LT
D 11 65	ADAK, ALASKA	N	122 X	42.80	SD	3.037	HT
D 12 65	ADAK, ALASKA	N	119 X	36.18	SD	3.121	LT
D 12 65	ADAK, ALASKA	N	119 X	38.70	SD	3.134	HT
D 01 66	ADAK, ALASKA	N	111 X	37.93	SD	4.389	LT
D 01 66	ADAK, ALASKA	N	111 X	40.59	SD	3.497	HT
D 02 66	ADAK, ALASKA	N	86 X	34.21	SD	2.714	LT
D 02 66	ADAK, ALASKA	N	86 X	36.71	SD	2.713	HT
D 03 66	ADAK, ALASKA	N	155 X	34.42	SD	2.005	LT
D 03 66	ADAK, ALASKA	N	155 X	36.99	SD	2.772	HT
D 04 66	ADAK, ALASKA	N	159 X	36.04	SD	2.627	LT
D 04 66	ADAK, ALASKA	N	159 X	39.39	SD	4.094	HT
D 05 66	ADAK, ALASKA	N	144 X	39.51	SD	1.844	LT
D 05 66	ADAK, ALASKA	N	144 X	41.06	SD	2.042	HT
D 01 67	ADAK, ALASKA	N	30 X	30.97	SD	2.456	LT
D 01 67	ADAK, ALASKA	N	30 X	33.00	SD	2.519	HT
D 02 67	ADAK, ALASKA	N	30 X	29.80	SD	2.007	LT
D 02 67	ADAK, ALASKA	N	30 X	31.93	SD	2.572	HT
D 03 67	ADAK, ALASKA	N	28 X	34.57	SD	3.479	LT
D 03 67	ADAK, ALASKA	N	28 X	39.07	SD	4.876	HT
D 04 67	ADAK, ALASKA	N	28 X	34.71	SD	3.640	LT
D 04 67	ADAK, ALASKA	N	28 X	42.29	SD	6.265	HT
D 05 67	ADAK, ALASKA	N	42 X	37.67	SD	2.826	LT
D 05 67	ADAK, ALASKA	N	42 X	43.79	SD	5.920	HT
D 06 67	ADAK, ALASKA	N	28 X	41.64	SD	2.642	LT
D 06 67	ADAK, ALASKA	N	28 X	48.71	SD	6.936	HT

TABLE 26. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines,
Monthly Summaries, NS, Adak, Alaska.

D 01 59	ADAK, ALASKA	N	48 X	25.84	SD	4.507	LT
D 01 59	ADAK, ALASKA	N	48 X	42.46	SD	3.809	HT
D 02 59	ADAK, ALASKA	N	48 X	26.42	SD	4.748	LT
D 02 59	ADAK, ALASKA	N	48 X	39.02	SD	4.802	HT
D 03 59	ADAK, ALASKA	N	49 X	27.86	SD	5.730	LT
D 03 59	ADAK, ALASKA	N	49 X	38.18	SD	4.572	HT
D 04 59	ADAK, ALASKA	N	54 X	30.33	SD	7.919	LT
D 04 59	ADAK, ALASKA	N	54 X	55.57	SD	8.386	HT
D 05 59	ADAK, ALASKA	N	50 X	36.20	SD	5.071	LT
D 05 59	ADAK, ALASKA	N	50 X	62.02	SD	6.511	HT
D 06 59	ADAK, ALASKA	N	54 X	38.39	SD	5.007	LT
D 06 59	ADAK, ALASKA	N	54 X	64.74	SD	9.643	HT
D 07 59	ADAK, ALASKA	N	54 X	42.72	SD	5.409	LT
D 07 59	ADAK, ALASKA	N	54 X	73.65	SD	8.115	HT
D 08 59	ADAK, ALASKA	N	56 X	49.34	SD	7.077	LT
D 08 59	ADAK, ALASKA	N	56 X	71.50	SD	10.209	HT
D 09 59	ADAK, ALASKA	N	57 X	46.37	SD	7.108	LT
D 09 59	ADAK, ALASKA	N	57 X	64.61	SD	7.255	HT
D 10 59	ADAK, ALASKA	N	57 X	38.51	SD	5.552	LT
D 10 59	ADAK, ALASKA	N	57 X	57.93	SD	7.808	HT
D 11 59	ADAK, ALASKA	N	55 X	31.60	SD	6.078	LT
D 11 59	ADAK, ALASKA	N	55 X	49.80	SD	4.540	HT
D 12 59	ADAK, ALASKA	N	60 X	26.10	SD	6.555	LT
D 12 59	ADAK, ALASKA	N	60 X	40.92	SD	4.742	HT
D 01 60	ADAK, ALASKA	N	55 X	26.02	SD	5.599	LT
D 01 60	ADAK, ALASKA	N	55 X	41.25	SD	4.949	HT
D 02 60	ADAK, ALASKA	N	53 X	27.53	SD	7.165	LT
D 02 60	ADAK, ALASKA	N	53 X	43.13	SD	5.630	HT
D 03 60	ADAK, ALASKA	N	60 X	30.12	SD	4.431	LT
D 03 60	ADAK, ALASKA	N	60 X	49.12	SD	6.943	HT
D 04 60	ADAK, ALASKA	N	54 X	29.70	SD	6.071	LT
D 04 60	ADAK, ALASKA	N	54 X	52.94	SD	5.496	HT
D 05 60	ADAK, ALASKA	N	54 X	34.65	SD	5.209	LT
D 05 60	ADAK, ALASKA	N	54 X	51.29	SD	7.329	HT
D 06 60	ADAK, ALASKA	N	57 X	40.51	SD	4.388	LT
D 06 60	ADAK, ALASKA	N	57 X	56.61	SD	6.700	HT
D 07 60	ADAK, ALASKA	N	51 X	45.22	SD	3.971	LT
D 07 60	ADAK, ALASKA	N	51 X	66.33	SD	5.989	HT
D 08 60	ADAK, ALASKA	N	64 X	46.89	SD	3.367	LT
D 08 60	ADAK, ALASKA	N	64 X	64.66	SD	5.002	HT
D 09 60	ADAK, ALASKA	N	67 X	42.68	SD	4.544	LT
D 09 60	ADAK, ALASKA	N	67 X	61.57	SD	3.434	HT
D 10 60	ADAK, ALASKA	N	74 X	36.54	SD	5.779	LT
D 10 60	ADAK, ALASKA	N	74 X	54.73	SD	5.825	HT
D 11 60	ADAK, ALASKA	N	74 X	26.72	SD	5.646	LT
D 11 60	ADAK, ALASKA	N	74 X	46.60	SD	3.917	HT
D 12 60	ADAK, ALASKA	N	75 X	25.65	SD	5.436	LT
D 12 60	ADAK, ALASKA	N	75 X	39.22	SD	4.372	HT

TABLE 26. (Contd.)

D 01 01	ADAK, ALASKA	N	39 X	24.92	SD	5.936	LT
D 01 01	ADAK, ALASKA	N	39 X	38.41	SD	4.011	HT
D 02 01	ADAK, ALASKA	N	43 X	27.23	SD	5.520	LT
D 02 01	ADAK, ALASKA	N	43 X	42.74	SD	6.126	HT
D 03 01	ADAK, ALASKA	N	29 X	27.00	SD	8.000	LT
D 03 01	ADAK, ALASKA	N	29 X	46.76	SD	6.495	HT
D 04 01	ADAK, ALASKA	N	50 X	31.68	SD	6.076	LT
D 04 01	ADAK, ALASKA	N	50 X	52.32	SD	6.514	HT
D 05 01	ADAK, ALASKA	N	73 X	34.89	SD	4.832	LT
D 05 01	ADAK, ALASKA	N	73 X	59.23	SD	7.277	HT
D 06 01	ADAK, ALASKA	N	77 X	40.43	SD	4.309	LT
D 06 01	ADAK, ALASKA	N	77 X	63.42	SD	7.057	HT
D 07 01	ADAK, ALASKA	N	70 X	42.33	SD	4.663	LT
D 07 01	ADAK, ALASKA	N	70 X	66.96	SD	6.896	HT
D 08 01	ADAK, ALASKA	N	82 X	45.63	SD	4.507	LT
D 08 01	ADAK, ALASKA	N	82 X	66.34	SD	5.972	HT
D 09 01	ADAK, ALASKA	N	75 X	45.23	SD	4.934	LT
D 09 01	ADAK, ALASKA	N	75 X	61.69	SD	4.762	HT
D 10 01	ADAK, ALASKA	N	83 X	38.55	SD	5.986	LT
D 10 01	ADAK, ALASKA	N	83 X	54.61	SD	6.303	HT
D 11 01	ADAK, ALASKA	N	74 X	31.95	SD	6.020	LT
D 11 01	ADAK, ALASKA	N	74 X	44.64	SD	5.162	HT
D 12 01	ADAK, ALASKA	N	67 X	30.25	SD	7.786	LT
D 12 01	ADAK, ALASKA	N	67 X	44.42	SD	6.337	HT
D 01 02	ADAK, ALASKA	N	73 X	27.27	SD	6.615	LT
D 01 02	ADAK, ALASKA	N	70 X	42.04	SD	5.452	HT
D 02 02	ADAK, ALASKA	N	67 X	28.90	SD	6.776	LT
D 02 02	ADAK, ALASKA	N	67 X	44.31	SD	7.191	HT
D 03 02	ADAK, ALASKA	N	71 X	34.23	SD	5.787	LT
D 03 02	ADAK, ALASKA	N	71 X	47.56	SD	4.973	HT
D 04 02	ADAK, ALASKA	N	82 X	35.76	SD	7.212	LT
D 04 02	ADAK, ALASKA	N	82 X	51.60	SD	8.984	HT
D 05 02	ADAK, ALASKA	N	92 X	40.12	SD	7.724	LT
D 05 02	ADAK, ALASKA	N	92 X	57.71	SD	8.239	HT
D 06 02	ADAK, ALASKA	N	83 X	46.41	SD	8.475	LT
D 06 02	ADAK, ALASKA	N	83 X	54.89	SD	11.124	HT
D 07 02	ADAK, ALASKA	N	85 X	50.32	SD	6.413	LT
D 07 02	ADAK, ALASKA	N	85 X	68.89	SD	8.637	HT
D 08 02	ADAK, ALASKA	N	94 X	50.09	SD	6.569	LT
D 08 02	ADAK, ALASKA	N	94 X	66.64	SD	6.814	HT
D 09 02	ADAK, ALASKA	N	78 X	42.94	SD	7.934	LT
D 09 02	ADAK, ALASKA	N	73 X	63.69	SD	7.393	HT
D 10 02	ADAK, ALASKA	N	98 X	38.95	SD	7.378	LT
D 10 02	ADAK, ALASKA	N	90 X	56.01	SD	7.337	HT
D 11 02	ADAK, ALASKA	N	82 X	31.43	SD	6.427	LT
D 11 02	ADAK, ALASKA	N	82 X	45.44	SD	7.536	HT
D 12 02	ADAK, ALASKA	N	90 X	31.99	SD	6.744	LT
D 12 02	ADAK, ALASKA	N	90 X	43.79	SD	8.483	HT

TABLE 26, (Contd.)

D 01 63	ADAK, ALASKA	N	95 X	33.03	SD	5.398	LT
D 01 63	ADAK, ALASKA	N	95 X	43.28	SD	6.065	HT
D 02 63	ADAK, ALASKA	N	84 X	31.85	SD	5.784	LT
D 02 63	ADAK, ALASKA	N	84 X	45.60	SD	6.975	HT
D 03 63	ADAK, ALASKA	N	90 X	33.44	SD	7.542	LT
D 03 63	ADAK, ALASKA	N	90 X	48.24	SD	5.207	HT
D 04 63	ADAK, ALASKA	N	93 X	37.78	SD	4.133	LT
D 04 63	ADAK, ALASKA	N	93 X	47.37	SD	4.200	HT
D 05 63	ADAK, ALASKA	N	95 X	37.14	SD	4.435	LT
D 05 63	ADAK, ALASKA	N	95 X	46.11	SD	4.038	HT
D 06 63	ADAK, ALASKA	N	84 X	39.46	SD	3.353	LT
D 06 63	ADAK, ALASKA	N	84 X	47.93	SD	2.961	HT
D 07 63	ADAK, ALASKA	N	94 X	47.33	SD	6.918	LT
D 07 63	ADAK, ALASKA	N	94 X	59.03	SD	6.015	HT
D 08 63	ADAK, ALASKA	N	92 X	47.66	SD	6.262	LT
D 08 63	ADAK, ALASKA	N	92 X	59.93	SD	6.585	HT
D 09 63	ADAK, ALASKA	N	89 X	46.43	SD	6.149	LT
D 09 63	ADAK, ALASKA	N	89 X	57.35	SD	6.669	HT
D 10 63	ADAK, ALASKA	N	95 X	43.02	SD	6.803	LT
D 10 63	ADAK, ALASKA	N	95 X	58.07	SD	6.115	HT
D 11 63	ADAK, ALASKA	N	79 X	38.54	SD	5.595	LT
D 11 63	ADAK, ALASKA	N	79 X	54.08	SD	6.535	HT
D 12 63	ADAK, ALASKA	N	73 X	32.82	SD	6.765	LT
D 12 63	ADAK, ALASKA	N	73 X	50.36	SD	8.709	HT
D 01 64	ADAK, ALASKA	N	49 X	26.71	SD	6.059	LT
D 01 64	ADAK, ALASKA	N	49 X	46.57	SD	6.964	HT
D 04 64	ADAK, ALASKA	N	22 X	29.73	SD	8.713	LT
D 04 64	ADAK, ALASKA	N	22 X	47.59	SD	8.523	HT
D 05 64	ADAK, ALASKA	N	43 X	30.65	SD	9.196	LT
D 05 64	ADAK, ALASKA	N	43 X	55.51	SD	18.832	HT
D 06 64	ADAK, ALASKA	N	48 X	35.50	SD	9.154	LT
D 06 64	ADAK, ALASKA	N	48 X	59.08	SD	15.129	HT
D 07 64	ADAK, ALASKA	N	65 X	41.66	SD	6.632	LT
D 07 64	ADAK, ALASKA	N	65 X	59.55	SD	14.124	HT
D 08 64	ADAK, ALASKA	N	54 X	45.06	SD	5.682	LT
D 08 64	ADAK, ALASKA	N	54 X	59.41	SD	11.726	HT
D 09 64	ADAK, ALASKA	N	57 X	40.93	SD	6.662	LT
D 09 64	ADAK, ALASKA	N	57 X	65.23	SD	9.584	HT
D 10 64	ADAK, ALASKA	N	79 X	37.06	SD	5.389	LT
D 10 64	ADAK, ALASKA	N	79 X	56.77	SD	5.959	HT
D 11 64	ADAK, ALASKA	N	53 X	29.63	SD	7.838	LT
D 11 64	ADAK, ALASKA	N	53 X	46.15	SD	6.358	HT
D 12 64	ADAK, ALASKA	N	56 X	27.26	SD	6.166	LT
D 12 64	ADAK, ALASKA	N	56 X	45.64	SD	5.058	HT

TABLE 26. (Contd.)

D 01 65	ADAK, ALASKA	N	73 X	25.51	SD	7.832	LT
D 01 65	ADAK, ALASKA	N	73 X	42.11	SD	7.580	HT
D 02 65	ADAK, ALASKA	N	53 X	28.85	SD	7.231	LT
D 02 65	ADAK, ALASKA	N	53 X	44.32	SD	7.361	HT
D 03 65	ADAK, ALASKA	N	44 X	35.64	SD	9.376	LT
D 03 65	ADAK, ALASKA	N	44 X	50.23	SD	8.507	HT
D 04 65	ADAK, ALASKA	N	77 X	36.70	SD	7.271	LT
D 04 65	ADAK, ALASKA	N	77 X	51.51	SD	7.810	HT
D 05 65	ADAK, ALASKA	N	60 X	40.28	SD	9.213	LT
D 05 65	ADAK, ALASKA	N	60 X	55.10	SD	7.730	HT
D 06 65	ADAK, ALASKA	N	70 X	42.90	SD	8.857	LT
D 06 65	ADAK, ALASKA	N	70 X	60.16	SD	10.313	HT
D 07 65	ADAK, ALASKA	N	68 X	48.21	SD	8.198	LT
D 07 65	ADAK, ALASKA	N	68 X	66.12	SD	8.782	HT
D 08 65	ADAK, ALASKA	N	64 X	50.78	SD	6.778	LT
D 08 65	ADAK, ALASKA	N	68 X	65.04	SD	7.814	HT
D 09 65	ADAK, ALASKA	N	65 X	42.15	SD	4.549	LT
D 09 65	ADAK, ALASKA	N	65 X	67.48	SD	8.575	HT
D 10 65	ADAK, ALASKA	N	62 X	37.29	SD	5.394	LT
D 10 65	ADAK, ALASKA	N	62 X	57.89	SD	7.788	HT
D 11 65	ADAK, ALASKA	N	69 X	33.17	SD	4.201	LT
D 11 65	ADAK, ALASKA	N	69 X	51.72	SD	6.128	HT
D 12 65	ADAK, ALASKA	N	49 X	27.06	SD	6.508	LT
D 12 65	ADAK, ALASKA	N	49 X	44.55	SD	6.222	HT
D 01 66	ADAK, ALASKA	N	55 X	26.57	SD	5.171	LT
D 01 66	ADAK, ALASKA	N	58 X	47.28	SD	7.317	HT
D 02 66	ADAK, ALASKA	N	40 X	27.05	SD	5.782	LT
D 02 66	ADAK, ALASKA	N	40 X	45.22	SD	6.251	HT
D 03 66	ADAK, ALASKA	N	26 X	26.73	SD	4.838	LT
D 03 66	ADAK, ALASKA	N	26 X	58.92	SD	9.376	HT
D 04 66	ADAK, ALASKA	N	47 X	31.89	SD	7.916	LT
D 04 66	ADAK, ALASKA	N	47 X	56.94	SD	9.246	HT
D 05 66	ADAK, ALASKA	N	20 X	36.25	SD	6.051	LT
D 05 66	ADAK, ALASKA	N	20 X	57.25	SD	10.765	HT
D 01 67	ADAK, ALASKA	N	21 X	30.43	SD	3.043	LT
D 01 67	ADAK, ALASKA	N	21 X	32.71	SD	2.759	HT
D 02 67	ADAK, ALASKA	N	20 X	27.00	SD	3.627	LT
D 02 67	ADAK, ALASKA	N	20 X	29.45	SD	3.284	HT
D 03 67	ADAK, ALASKA	N	22 X	30.32	SD	9.554	LT
D 03 67	ADAK, ALASKA	N	22 X	44.00	SD	10.506	HT
D 04 67	ADAK, ALASKA	N	20 X	28.90	SD	10.026	LT
D 04 67	ADAK, ALASKA	N	20 X	54.25	SD	11.920	HT
D 05 67	ADAK, ALASKA	N	23 X	35.89	SD	4.802	LT
D 05 67	ADAK, ALASKA	N	23 X	58.00	SD	13.194	HT
D 06 67	ADAK, ALASKA	N	18 X	43.75	SD	7.954	LT
D 06 67	ADAK, ALASKA	N	18 X	57.62	SD	10.327	HT

TABLE 27. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, NAS, Brunswick, Maine.

L 01 65	BRUNSWICK, MAINE	N	76	X	30.49	SD	3.876	LT
L 01 65	BRUNSWICK, MAINE	N	76	X	36.32	SD	2.895	HT
L 02 65	BRUNSWICK, MAINE	N	317	X	27.36	SD	4.361	LT
L 02 65	BRUNSWICK, MAINE	N	317	X	35.76	SD	4.385	HT
L 03 65	BRUNSWICK, MAINE	N	439	X	31.28	SD	3.185	LT
L 03 65	BRUNSWICK, MAINE	N	439	X	39.31	SD	3.447	HT
L 04 65	BRUNSWICK, MAINE	N	432	X	36.47	SD	3.708	LT
L 04 65	BRUNSWICK, MAINE	N	432	X	43.77	SD	4.635	HT
L 05 65	BRUNSWICK, MAINE	N	473	X	45.09	SD	5.147	LT
L 05 65	BRUNSWICK, MAINE	N	473	X	52.93	SD	7.049	HT
L 06 65	BRUNSWICK, MAINE	N	22	X	57.73	SD	3.150	LT
L 06 65	BRUNSWICK, MAINE	N	22	X	60.36	SD	3.836	HT
L 07 65	BRUNSWICK, MAINE	N	419	X	62.85	SD	2.286	LT
L 07 65	BRUNSWICK, MAINE	N	419	X	70.92	SD	6.076	PT
L 08 65	BRUNSWICK, MAINE	N	151	X	61.85	SD	3.577	LT
L 08 65	BRUNSWICK, MAINE	N	151	X	69.48	SD	5.656	HT
L 09 65	BRUNSWICK, MAINE	N	508	X	58.99	SD	4.750	LT
L 09 65	BRUNSWICK, MAINE	N	508	X	66.37	SD	6.006	HT
L 10 65	BRUNSWICK, MAINE	N	257	X	50.51	SD	3.307	LT
L 10 65	BRUNSWICK, MAINE	N	257	X	57.22	SD	4.502	HT
L 11 65	BRUNSWICK, MAINE	N	372	X	43.44	SD	4.326	LT
L 11 65	BRUNSWICK, MAINE	N	372	X	47.93	SD	4.228	HT
L 12 65	BRUNSWICK, MAINE	N	343	X	34.38	SD	4.842	LT
L 12 65	BRUNSWICK, MAINE	N	343	X	40.27	SD	3.885	HT
L 01 66	BRUNSWICK, MAINE	N	339	X	27.70	SD	4.654	LT
L 01 66	BRUNSWICK, MAINE	N	339	X	34.88	SD	3.819	HT
L 02 66	BRUNSWICK, MAINE	N	349	X	27.09	SD	4.278	LT
L 02 66	BRUNSWICK, MAINE	N	349	X	35.30	SD	4.533	HT
L 03 66	BRUNSWICK, MAINE	N	455	X	31.41	SD	3.086	LT
L 03 66	BRUNSWICK, MAINE	N	455	X	39.27	SD	3.269	HT
L 04 66	BRUNSWICK, MAINE	N	441	X	36.71	SD	3.645	LT
L 04 66	BRUNSWICK, MAINE	N	441	X	43.88	SD	4.659	HT
L 05 66	BRUNSWICK, MAINE	N	456	X	44.89	SD	4.957	LT
L 05 66	BRUNSWICK, MAINE	N	456	X	52.41	SD	6.827	HT
L 06 66	BRUNSWICK, MAINE	N	441	X	56.55	SD	3.762	LT
L 06 66	BRUNSWICK, MAINE	N	441	X	64.04	SD	5.587	HT
L 07 66	BRUNSWICK, MAINE	N	452	X	62.75	SD	2.315	LT
L 07 66	BRUNSWICK, MAINE	N	452	X	70.78	SD	5.890	HT
L 08 66	BRUNSWICK, MAINE	N	477	X	63.40	SD	2.620	LT
L 08 66	BRUNSWICK, MAINE	N	477	X	70.25	SD	5.272	HT
L 09 66	BRUNSWICK, MAINE	N	457	X	48.39	SD	4.115	LT
L 09 66	BRUNSWICK, MAINE	N	457	X	57.22	SD	5.720	HT
L 10 66	BRUNSWICK, MAINE	N	423	X	50.22	SD	3.818	LT
L 10 66	BRUNSWICK, MAINE	N	423	X	57.32	SD	5.050	HT
L 11 66	BRUNSWICK, MAINE	N	380	X	43.99	SD	4.169	LT
L 11 66	BRUNSWICK, MAINE	N	380	X	48.36	SD	3.975	HT
L 12 66	BRUNSWICK, MAINE	N	72	X	37.28	SD	4.260	LT
L 12 66	BRUNSWICK, MAINE	N	72	X	44.10	SD	4.348	HT

TABLE 28. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines,
Monthly Summaries, NAS, Brunswick, Maine.

D 01 65	BRUNSWICK, MAINE	N	129	X	21.19	SD	11.107	LT
D 01 65	BRUNSWICK, MAINE	N	129	X	33.98	SD	7.184	HT
D 02 65	BRUNSWICK, MAINE	N	159	X	19.75	SD	10.321	LY
D 02 65	BRUNSWICK, MAINE	N	159	X	34.72	SD	7.350	HT
D 03 65	BRUNSWICK, MAINE	N	198	X	28.39	SD	6.435	LT
D 03 65	BRUNSWICK, MAINE	N	198	X	44.87	SD	5.100	HT
D 04 65	BRUNSWICK, MAINE	N	190	X	35.26	SD	5.375	LT
D 04 65	BRUNSWICK, MAINE	N	190	X	49.99	SD	6.860	HT
D 05 65	BRUNSWICK, MAINE	N	206	X	46.96	SD	8.095	LT
D 05 65	BRUNSWICK, MAINE	N	206	X	60.00	SD	10.239	HT
D 06 65	BRUNSWICK, MAINE	N	22	X	56.95	SD	2.572	LT
D 06 65	BRUNSWICK, MAINE	N	22	X	57.95	SD	2.554	HT
D 07 65	BRUNSWICK, MAINE	N	236	X	64.30	SD	3.728	LT
D 07 65	BRUNSWICK, MAINE	N	236	X	77.85	SD	7.106	HT
D 08 65	BRUNSWICK, MAINE	N	82	X	60.46	SD	6.000	LT
D 08 65	BRUNSWICK, MAINE	N	82	X	72.30	SD	6.300	HT
D 09 65	BRUNSWICK, MAINE	N	244	X	55.57	SD	7.637	LT
D 09 65	BRUNSWICK, MAINE	N	244	X	70.33	SD	7.341	HT
D 10 65	BRUNSWICK, MAINE	N	126	X	46.61	SD	6.971	LT
D 10 65	BRUNSWICK, MAINE	N	126	X	58.00	SD	5.112	HT
D 11 65	BRUNSWICK, MAINE	N	184	X	35.66	SD	8.222	LT
D 11 65	BRUNSWICK, MAINE	N	184	X	46.20	SD	6.078	HT
D 12 65	BRUNSWICK, MAINE	N	195	X	26.14	SD	10.604	LT
D 12 65	BRUNSWICK, MAINE	N	195	X	37.99	SD	7.348	HT
D 01 66	BRUNSWICK, MAINE	N	163	X	15.80	SD	11.490	LT
D 01 66	BRUNSWICK, MAINE	N	163	X	34.82	SD	7.592	HT
D 02 66	BRUNSWICK, MAINE	N	161	X	19.14	SD	11.352	LT
D 02 66	BRUNSWICK, MAINE	N	161	X	35.27	SD	7.580	HT
D 03 66	BRUNSWICK, MAINE	N	209	X	28.81	SD	6.630	LT
D 03 66	BRUNSWICK, MAINE	N	209	X	44.68	SD	5.113	HT
D 04 66	BRUNSWICK, MAINE	N	201	X	35.74	SD	5.429	LT
D 04 66	BRUNSWICK, MAINE	N	201	X	49.78	SD	6.821	HT
D 05 66	BRUNSWICK, MAINE	N	206	X	46.70	SD	7.986	LT
D 05 66	BRUNSWICK, MAINE	N	206	X	59.44	SD	10.175	HT
D 06 66	BRUNSWICK, MAINE	N	203	X	52.00	SD	4.824	LT
D 06 66	BRUNSWICK, MAINE	N	203	X	72.94	SD	8.347	HT
D 07 66	BRUNSWICK, MAINE	N	207	X	64.64	SD	3.775	LT
D 07 66	BRUNSWICK, MAINE	N	207	X	79.48	SD	5.645	HT
D 08 66	BRUNSWICK, MAINE	N	209	X	63.00	SD	3.267	LT
D 08 66	BRUNSWICK, MAINE	N	209	X	77.31	SD	6.139	HT
D 09 66	BRUNSWICK, MAINE	N	201	X	54.03	SD	7.682	LT
D 09 66	BRUNSWICK, MAINE	N	201	X	70.03	SD	8.725	HT
D 10 66	BRUNSWICK, MAINE	N	206	X	44.77	SD	6.443	LT
D 10 66	BRUNSWICK, MAINE	N	206	X	58.81	SD	5.515	HT
D 11 66	BRUNSWICK, MAINE	N	200	X	37.38	SD	8.806	LT
D 11 66	BRUNSWICK, MAINE	N	200	X	47.05	SD	5.696	HT
D 12 66	BRUNSWICK, MAINE	N	34	X	23.44	SD	10.782	LT
D 12 66	BRUNSWICK, MAINE	N	34	X	40.29	SD	5.921	HT

GRAPHIC NOT REPRODUCIBLE

TABLE 29. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines, Monthly Summaries, NS, Argentina, Newfoundland.

0 01 05	U.S.N.S.	NEWF.	N	8 X	28.54	SD	3.505	LT
0 01 05	U.S.N.S.	NEWF.	N	8 X	35.62	SD	2.504	HT
0 02 05	U.S.N.S.	NEWF.	N	1 X	30.00	SD	.000	LT
0 02 05	U.S.N.S.	NEWF.	N	1 X	34.00	SD	.000	HT
0 03 05	U.S.N.S.	NEWF.	N	2 X	28.54	SD	.707	LT
0 03 05	U.S.N.S.	NEWF.	N	2 X	33.00	SD	.000	HT
0 04 05	U.S.N.S.	NEWF.	N	14 X	34.56	SD	3.231	LT
0 04 05	U.S.N.S.	NEWF.	N	14 X	40.86	SD	6.993	HT
0 05 05	U.S.N.S.	NEWF.	N	6 X	37.33	SD	2.160	LT
0 05 05	U.S.N.S.	NEWF.	N	6 X	41.33	SD	3.502	HT
0 06 05	U.S.N.S.	NEWF.	H	124 X	43.94	SD	4.907	LT
0 06 05	U.S.N.S.	NEWF.	N	124 X	50.80	SD	5.162	HT
0 07 05	U.S.N.S.	NEWF.	N	192 X	51.35	SD	3.967	LT
0 07 05	U.S.N.S.	NEWF.	N	192 X	57.67	SD	4.610	HT
0 08 05	U.S.N.S.	NEWF.	H	61 X	55.33	SD	6.087	LT
0 08 05	U.S.N.S.	NEWF.	N	61 X	60.64	SD	3.522	HT
0 09 05	U.S.N.S.	NEWF.	H	69 X	53.10	SD	4.336	LT
0 09 05	U.S.N.S.	NEWF.	N	69 X	51.48	SD	3.648	HT
0 10 05	U.S.N.S.	NEWF.	H	50 X	47.63	SD	4.855	LT
0 10 05	U.S.N.S.	NEWF.	N	50 X	55.52	SD	4.709	HT
0 11 05	U.S.N.S.	NEWF.	H	83 X	39.22	SD	4.370	LT
0 11 05	U.S.N.S.	NEWF.	N	82 X	51.24	SD	6.792	HT
0 12 05	U.S.N.S.	NEWF.	H	63 X	38.79	SD	5.440	LT
0 12 05	U.S.N.S.	NEWF.	N	63 X	44.27	SD	8.890	HT
0 01 06	U.S.N.S.	NEWF.	N	34 X	29.20	SD	5.090	LT
0 01 06	U.S.N.S.	NEWF.	N	34 X	37.39	SD	6.267	HT
0 02 06	U.S.N.S.	NEWF.	N	41 X	28.71	SD	6.051	LT
0 02 06	U.S.N.S.	NEWF.	N	41 X	36.51	SD	5.801	HT
0 03 06	U.S.N.S.	NEWF.	N	54 X	29.69	SD	4.842	LT
0 03 06	U.S.N.S.	NEWF.	H	54 X	36.69	SD	3.821	HT
0 04 06	U.S.N.S.	NEWF.	H	32 X	32.92	SD	4.142	LT
0 04 06	U.S.N.S.	NEWF.	N	32 X	40.45	SD	3.456	HT
0 05 06	U.S.N.S.	NEWF.	H	39 X	34.55	SD	5.753	LT
0 05 06	U.S.N.S.	NEWF.	H	39 X	42.35	SD	3.203	HT
0 06 06	U.S.N.S.	NEWF.	N	56 X	41.06	SD	5.956	LT
0 06 06	U.S.N.S.	NEWF.	H	56 X	49.95	SD	4.240	HT
0 07 06	U.S.N.S.	NEWF.	H	56 X	49.65	SD	6.219	LT
0 07 06	U.S.N.S.	NEWF.	N	56 X	53.22	SD	4.455	HT
0 08 06	U.S.N.S.	NEWF.	H	73 X	54.34	SD	4.671	LT
0 08 06	U.S.N.S.	NEWF.	H	73 X	52.25	SD	4.210	HT
0 09 06	U.S.N.S.	NEWF.	N	68 X	53.17	SD	3.021	LT
0 09 06	U.S.N.S.	NEWF.	H	68 X	55.22	SD	4.400	HT
0 10 06	U.S.N.S.	NEWF.	H	57 X	48.57	SD	3.042	LT
0 10 06	U.S.N.S.	NEWF.	N	57 X	56.89	SD	5.038	HT
0 11 06	U.S.N.S.	NEWF.	H	61 X	41.74	SD	4.195	LT
0 11 06	U.S.N.S.	NEWF.	H	61 X	49.79	SD	6.598	HT
0 12 06	U.S.N.S.	NEWF.	N	52 X	35.21	SD	5.322	LT
0 12 06	U.S.N.S.	NEWF.	H	52 X	43.90	SD	5.613	HT

GRAPHIC NOT REPRODUCIBLE

TABLE 22. (Contd.)

L 01 07	U.S.N.S.	NEWF.	N	39	X	33.10	SD	3.831	LT
L 01 07	U.S.N.S.	NEWF.	N	39	X	44.68	SD	7.982	HT
L 02 07	U.S.N.S.	NEWF.	N	14	X	27.86	SD	5.447	LT
L 02 07	U.S.N.S.	NEWF.	N	14	X	37.71	SD	6.005	HT
L 03 07	U.S.N.S.	NEWF.	N	35	X	26.14	SD	4.216	LT
L 03 07	U.S.N.S.	NEWF.	N	35	X	35.14	SD	4.900	HT
L 04 07	U.S.N.S.	NEWF.	N	19	X	27.37	SD	5.766	LT
L 04 07	U.S.N.S.	NEWF.	N	19	X	36.21	SD	4.467	HT
L 05 07	U.S.N.S.	NEWF.	N	34	X	35.03	SD	3.818	LT
L 05 07	U.S.N.S.	NEWF.	N	34	X	44.00	SD	5.240	HT
L 06 07	U.S.N.S.	NEWF.	N	10	X	36.70	SD	5.658	LT
L 06 07	U.S.N.S.	NEWF.	N	10	X	47.00	SD	2.582	HT

TABLE 30. Minimum and Maximum Storage Temperature in Earth-Covered Storage Magazines,
Monthly Summaries, NS, Keflavik, Iceland.

D 10 64	U.S.N.S.	ICELAND N	9 X	38.00	SD	3.873	LT
D 10 64	U.S.N.S.	ICELAND H	9 X	45.11	SD	5.207	HT
D 11 64	U.S.N.S.	ICELAND H	20 X	34.25	SD	8.372	LT
D 11 64	U.S.N.S.	ICELAND H	20 X	46.55	SD	4.718	HT
L 12 64	U.S.N.S.	ICELAND H	22 X	29.55	SD	5.280	LT
D 12 64	U.S.N.S.	ICELAND H	22 X	41.55	SD	3.348	HT
D 01 65	U.S.N.S.	ICELAND H	20 X	27.30	SD	4.305	LT
D 01 65	U.S.N.S.	ICELAND H	20 X	39.75	SD	6.069	HT
D 02 65	U.S.N.S.	ICELAND H	9 X	26.89	SD	3.887	LT
D 02 65	U.S.N.S.	ICELAND H	9 X	40.44	SD	5.270	HT
D 03 65	U.S.N.S.	ICELAND H	44 X	28.34	SD	5.734	LT
L 03 65	U.S.N.S.	ICELAND H	44 X	39.39	SD	6.868	HT
D 04 65	U.S.N.S.	ICELAND H	24 X	27.71	SD	5.583	LT
D 04 65	U.S.N.S.	ICELAND H	24 X	43.62	SD	8.865	HT
D 05 65	U.S.N.S.	ICELAND H	36 X	35.14	SD	6.128	LT
D 05 65	U.S.N.S.	ICELAND H	36 X	47.86	SD	6.962	HT
D 06 65	U.S.N.S.	ICELAND H	45 X	41.44	SD	5.101	LT
L 06 65	U.S.N.S.	ICELAND H	45 X	55.42	SD	8.672	HT
D 07 65	U.S.N.S.	ICELAND H	36 X	45.33	SD	5.204	LT
D 07 65	U.S.N.S.	ICELAND H	36 X	58.64	SD	7.318	HT
D 06 65	U.S.N.S.	ICELAND H	27 X	46.44	SL	5.221	LT
L 06 65	U.S.N.S.	ICELAND H	27 X	60.44	SD	7.376	HT
D 09 65	U.S.N.S.	ICELAND H	36 X	45.56	SL	3.359	LT
L 09 65	U.S.N.S.	ICELAND H	36 X	52.33	SD	3.456	HT
L 10 65	U.S.N.S.	ICELAND H	27 X	44.44	SD	3.935	LT
D 10 65	U.S.N.S.	ICELAND H	27 X	50.37	SD	3.028	HT
D 11 65	U.S.N.S.	ICELAND H	27 X	34.70	SD	5.632	LT
D 11 65	U.S.N.S.	ICELAND H	27 X	43.00	SD	3.494	HT
D 12 65	U.S.N.S.	ICELAND H	45 X	29.82	SD	5.374	LT
D 12 65	U.S.N.S.	ICELAND H	45 X	35.87	SD	4.906	HT

TABLE 30. (Contd.)

D 01 66	U.S.N.S.	ICELAND	N	25	X	31.20	SD	7.118	LT
D 01 66	U.S.N.S.	ICELAND	N	25	X	35.75	SD	6.333	HT
D 02 66	U.S.N.S.	ICELAND	N	36	X	29.81	SD	2.984	LT
D 02 66	U.S.N.S.	ICELAND	N	36	X	37.11	SD	4.839	HT
D 03 66	U.S.N.S.	ICELAND	N	45	X	30.58	SD	4.031	LT
D 03 66	U.S.N.S.	ICELAND	N	45	X	36.67	SD	2.697	HT
D 04 66	U.S.N.S.	ICELAND	N	27	X	34.11	SD	3.401	LT
D 04 66	U.S.N.S.	ICELAND	H	27	X	39.85	SD	2.656	HT
D 05 66	U.S.N.S.	ICELAND	N	34	X	38.26	SD	3.629	LT
D 05 66	U.S.N.S.	ICELAND	N	34	X	44.09	SD	3.334	HT
D 06 66	U.S.N.S.	ICELAND	N	48	X	45.15	SD	3.433	LT
D 06 66	U.S.N.S.	ICELAND	N	48	X	51.02	SD	4.003	HT
D 07 66	U.S.N.S.	ICELAND	N	30	X	50.70	SD	3.153	LT
D 07 66	U.S.N.S.	ICELAND	N	30	X	56.67	SD	5.254	HT
D 08 66	U.S.N.S.	ICELAND	N	35	X	50.37	SD	2.798	LT
D 08 66	U.S.N.S.	ICELAND	N	35	X	56.26	SD	4.238	HT
D 09 66	U.S.N.S.	ICELAND	H	19	X	46.37	SD	3.961	LT
D 09 66	U.S.N.S.	ICELAND	H	19	X	52.60	SD	2.404	HT
D 10 66	U.S.N.S.	ICELAND	N	24	X	42.33	SD	3.807	LT
D 10 66	U.S.N.S.	ICELAND	N	24	X	48.42	SD	3.955	HT
D 11 66	U.S.N.S.	ICELAND	N	22	X	34.45	SD	6.501	LT
D 11 66	U.S.N.S.	ICELAND	N	22	X	43.91	SD	5.255	HT
D 12 66	U.S.N.S.	ICELAND	N	11	X	29.64	SD	5.573	LT
D 12 66	U.S.N.S.	ICELAND	N	11	X	39.09	SD	3.015	HT
D 01 67	U.S.N.S.	ICELAND	N	20	X	29.75	SD	5.014	LT
D 01 67	U.S.N.S.	ICELAND	N	20	X	38.70	SD	2.755	HT
D 02 67	U.S.N.S.	ICELAND	N	20	X	32.10	SD	5.330	LT
D 02 67	U.S.N.S.	ICELAND	H	20	X	42.20	SD	1.824	HT
D 03 67	U.S.N.S.	ICELAND	N	30	X	23.80	SD	7.827	LT
D 03 67	U.S.N.S.	ICELAND	N	30	X	40.37	SD	8.315	HT
D 04 67	U.S.N.S.	ICELAND	N	20	X	26.20	SD	2.821	LT
D 04 67	U.S.N.S.	ICELAND	H	20	X	43.20	SD	5.709	HT
D 05 67	U.S.N.S.	ICELAND	N	9	X	31.11	SD	4.372	LT
D 05 67	U.S.N.S.	ICELAND	H	9	X	44.60	SD	3.606	HT

NWC TP 4143

Part 4

TABLE 31. Minimum and Maximum Storage Temperature in Non-Earth-Covered Storage Magazines, Monthly Summaries, NS, Keflavik, Iceland.

D 10 64	U.S.N.S.	ICELAND	N	9	X	37.11	SD	4.807	LT
L 10 64	U.S.N.S.	ICELAND	H	9	X	54.89	SD	1.764	HT
D 11 64	U.S.N.S.	ICELAND	N	16	X	27.06	SD	8.386	LT
D 11 64	U.S.N.S.	ICELAND	H	16	X	46.75	SD	4.123	HT
D 12 64	U.S.N.S.	ICELAND	N	16	X	17.50	SD	6.613	LT
D 12 64	U.S.N.S.	ICELAND	H	16	X	45.81	SD	4.708	HT
D 01 65	U.S.N.S.	ICELAND	N	27	X	14.44	SD	5.041	LT
D 01 65	U.S.N.S.	ICELAND	H	27	X	45.59	SD	5.839	HT
D 02 65	U.S.N.S.	ICELAND	N	8	X	21.50	SD	6.118	LT
D 02 65	U.S.N.S.	ICELAND	H	8	X	45.37	SD	2.973	HT
D 03 65	U.S.N.S.	ICELAND	N	30	X	21.87	SD	6.947	LT
D 03 65	U.S.N.S.	ICELAND	H	30	X	46.93	SD	6.080	HT
D 04 65	U.S.N.S.	ICELAND	N	14	X	25.86	SD	5.682	LT
D 04 65	U.S.N.S.	ICELAND	H	14	X	57.86	SD	3.713	HT
D 05 65	U.S.N.S.	ICELAND	N	18	X	38.67	SD	5.269	LT
D 05 65	U.S.N.S.	ICELAND	H	18	X	61.78	SD	4.181	HT
D 06 65	U.S.N.S.	ICELAND	N	26	X	46.23	SD	4.246	LT
D 06 65	U.S.N.S.	ICELAND	H	26	X	68.15	SD	5.583	HT
D 07 65	U.S.N.S.	ICELAND	N	28	X	51.21	SD	6.466	LT
D 07 65	U.S.N.S.	ICELAND	H	28	X	75.89	SD	6.613	HT
D 08 65	U.S.N.S.	ICELAND	N	21	X	44.76	SD	6.212	LT
D 08 65	U.S.N.S.	ICELAND	H	21	X	66.24	SD	7.085	HT
D 09 65	U.S.N.S.	ICELAND	N	28	X	40.82	SD	4.439	LT
D 09 65	U.S.N.S.	ICELAND	H	28	X	64.00	SD	5.676	HT
D 10 65	U.S.N.S.	ICELAND	N	21	X	38.67	SD	4.789	LT
D 10 65	U.S.N.S.	ICELAND	H	21	X	56.10	SD	6.115	HT
D 11 65	U.S.N.S.	ICELAND	N	15	X	27.47	SD	5.902	LT
D 11 65	U.S.N.S.	ICELAND	H	15	X	45.00	SD	10.876	HT
D 12 65	U.S.N.S.	ICELAND	N	27	X	19.59	SD	4.774	LT
D 12 65	U.S.N.S.	ICELAND	H	27	X	36.96	SD	6.642	HT

TABLE 31. (Contd.)

D 01 66	U.S.N.S.	ICELAND	N	13	X	19.38	SD	8.656	LT
D 01 66	U.S.N.S.	ICELAND	N	13	X	43.92	SD	7.308	HT
D 02 66	U.S.N.S.	ICELAND	N	21	X	18.52	SD	2.713	LT
D 02 66	U.S.N.S.	ICELAND	N	21	X	36.24	SD	5.864	HT
D 03 66	U.S.N.S.	ICELAND	N	25	X	25.12	SD	4.944	LT
D 03 66	U.S.N.S.	ICELAND	N	25	X	44.24	SD	7.769	HT
D 04 66	U.S.N.S.	ICELAND	N	15	X	31.27	SD	4.847	LT
D 04 66	U.S.N.S.	ICELAND	N	15	X	55.53	SD	8.999	HT
D 05 66	U.S.N.S.	ICELAND	N	20	X	38.85	SD	4.934	LT
D 05 66	U.S.N.S.	ICELAND	N	20	X	62.85	SD	8.067	HT
D 06 66	U.S.N.S.	ICELAND	N	31	X	46.52	SD	3.678	LT
D 06 66	U.S.N.S.	ICELAND	N	31	X	71.35	SD	7.961	HT
D 07 66	U.S.N.S.	ICELAND	N	20	X	51.55	SD	2.762	LT
D 07 66	U.S.N.S.	ICELAND	N	20	X	76.30	SD	11.131	HT
D 08 66	U.S.N.S.	ICELAND	N	23	X	49.74	SD	5.794	LT
D 08 66	U.S.N.S.	ICELAND	N	23	X	74.87	SD	7.990	HT
D 09 66	U.S.N.S.	ICELAND	N	20	X	43.00	SD	2.865	LT
D 09 66	U.S.N.S.	ICELAND	N	20	X	64.05	SD	7.097	HT
D 10 66	U.S.N.S.	ICELAND	N	20	X	31.75	SD	4.375	LT
D 10 66	U.S.N.S.	ICELAND	N	20	X	54.90	SD	7.853	HT
D 11 66	U.S.N.S.	ICELAND	N	10	X	28.30	SD	4.620	LT
D 11 66	U.S.N.S.	ICELAND	N	10	X	47.90	SD	5.587	HT
D 12 66	U.S.N.S.	ICELAND	N	9	X	21.22	SD	7.645	LT
D 12 66	U.S.N.S.	ICELAND	N	9	X	41.56	SD	3.941	HT
D 01 67	U.S.N.S.	ICELAND	N	12	X	21.83	SD	7.554	LT
D 01 67	U.S.N.S.	ICELAND	N	12	X	44.17	SD	5.875	HT
D 02 67	U.S.N.S.	ICELAND	N	12	X	24.33	SD	3.892	LT
D 02 67	U.S.N.S.	ICELAND	N	12	X	51.50	SD	7.586	HT
D 03 67	U.S.N.S.	ICELAND	N	20	X	19.60	SD	6.411	LT
D 03 67	U.S.N.S.	ICELAND	N	20	X	45.55	SD	10.836	HT
D 04 67	U.S.N.S.	ICELAND	N	7	X	18.29	SD	6.473	LT
D 04 67	U.S.N.S.	ICELAND	N	7	X	52.66	SD	9.442	HT
D 05 67	U.S.N.S.	ICELAND	N	2	X	42.00	SD	00.000	LT
D 05 67	U.S.N.S.	ICELAND	N	2	X	46.00	SD	00.000	HT

BLANK PAGE

Appendix E

STATISTICAL NOTES AND IMPLICATIONS

The following points concerning the data should be considered before making final judgment on the contents of this report.

- (1) The time intervals at which temperature readings were taken were not equal. The maximum and minimum temperature readings were those encountered within the magazine during those intervals of time. The difference in reading-time intervals biases the results in both maximum and minimum directions. It has been found that the temperatures in some magazines were read daily, weekly, biweekly, or monthly, or less frequently, depending on the material and procedures cogent to each facility. This, of course, biases the results upward as a high temperature for 1 day may be the recorded temperature for that magazine for a 1-week or greater period, instead of for that specific day.
- (2) The amount of ammunition in the storage magazines is not always constant. The absorption of heat by the ammunition (dependent on the quantity of material) within the magazine could cause differences in temperature readings that are not accounted for.
- (3) The frequency at which the magazine doors are opened will also influence the temperature readings. This effect is also not accounted for.
- (4) The Data Summary indicating the number of minimum temperature readings less than nominal temperatures is exclusive of maximum temperature readings. Perhaps the maximum temperatures could be used in such a way as to provide the time duration of these nominal temperatures. If, for example, the maximum temperature recorded for a reading interval is 20°F, it is certain that the temperature within the storage magazine was no higher than 20°F during that reading interval.

The number of data points, the averages, and the standard deviations of temperature readings for each month was reported in Appendix C and D because these statistics provide information concerning the distribution of temperature readings. If it is assumed that these temperature measurements are normally distributed (the Gaussian curve) within each month, and the data in most cases does not indicate that it is a poor assumption for practical use, the standard deviation can be used to attach probabilities of occurrences to nominal temperature values. For example, in January 1965, for earth-covered magazines at NAD, Bremerton, Washington, the sample size is 34, the average minimum temperature is 37.97°F, and the standard deviation is 2.516°F.

From this and the assumption that the data is representative of the storage temperatures encountered in January, the probability of getting a storage temperature of $30.4 (37.97 - \rho_3)$ °F or less is .005.

In some cases where the distribution of temperatures is not normal within a month, one might consider the use of order statistics to predict the occurrence of storage temperatures less than nominal temperatures. With the application of order statistics one would be able to say that in W-22, non-earth-covered storage building, at Fort Richardson, Alaska, the probability of encountering a temperature of less than -9°F is less than one in a hundred in the month of December; this also applies to January.

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author)		2a. REPORT SECURITY CLASSIFICATION	
Naval Weapons Center China Lake, California 93555		UNCLASSIFIED	
2b. GROUP			
3. REPORT TITLE			
STORAGE TEMPERATURE OF EXPLOSIVE HAZARD MAGAZINES, PART 4. COLD EXTREMES			
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)			
Temperature measurement studies			
5. AUTHOR(S) (First name, middle initial, last name)			
I. S. Kurotori, and H. C. Schafer			
6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS	
May 1968	100	None	
8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)		
b. PROJECT NO.	NWC TP 4143, Part 4		
c.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)		
d.			
10. DISTRIBUTION STATEMENT			
This document is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of the Naval Weapons Center.			
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY	
		Naval Air Systems Command Naval Material Command Washington, D. C. 20360	
13. ABSTRACT			
<p>Storage magazine temperature measurements (34,607 data points) from Alaska, Washington, Maine, Newfoundland, and Iceland are under study. This data collection is for the purpose of establishing a temperature criterion by statistical methods for ordnance stored in explosive hazard magazines.</p> <p>This report is the fourth of this series of reports which will cover explosive hazard magazine storage temperatures throughout the world. This report includes 37 figures and 31 tables.</p>			

DD FORM 1473 (PAGE 1)

1 NOV 65
S/N 0101-807-6801

UNCLASSIFIED

Security Classification

UNCLASSIFIED

Security Classification

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Magazine temperature at NAD, Bremerton, Washington NAS, Seattle, Washington Fort Richardson, Alaska NS, Kodiak, Alaska NS, Adak, Alaska NAS, Brunswick, Maine NS, Argentia, Newfoundland NS, Keflavik, Iceland Temperature data retrieval Temperature data reduction						